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RAPID TRANSITION OF A YOUNG STATE TO MATURITY : RESOURCES FOR HUMAN DEVELOPMENT IN CHHATTISGARH

Tapas K. Sen
H.K. Amar Nath
Mita Choudhury
Surajit Das

National Institute of Public Finance and Policy
New Delhi-110067

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Preface

This is the seventh and penultimate study report prepared under the research project ***Financing Human development in India***, now completed at National Institute of Public Finance and Policy. This project was in turn a part of a larger programme of ***Strengthening State Plans for Human Development***, executed by the Planning Commission and sponsored by UNDP India.

The research team for this study was led by Tapas K. Sen, the other members of the team being H.K. Amar Nath, Mita Choudhury and Surojit Das. Excellent research assistance was provided by Sandip Biswal, Narendra Jena and Krishanu Karmakar.

The Governing Body of the Institute does not take any responsibility for the contents of this monograph; it belongs to the authors only.

M. Govinda Rao
Director

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This is the penultimate state report to be published under the research project Financing Human Development, carried out at the National Institute of Public Finance and Policy. This research project was a part of the broader programme of Strengthening State Plans for Human Development, jointly sponsored by the Planning Commission and UNDP India. As for all the other studies published under this research project, we are happy to record our gratitude to these two organisations and the concerned officials of these organisations for making this study possible.

At the state level, Shri D. S. Misra (subsequently replaced by Shri Ajay Singh) and Shri Kishore Pariyar were our main co-ordinated the work for this study on behalf of the state government. They have cheerfully put up with our not inconsiderable demands on their time and patience for which we profusely thank them. As this study covered several areas and hence several departments, we had to impose ourselves on a number of state government officials, too numerous to fully list. Some of them (in no particular order) were Vikas Sheel, Kamlesh Jain, V. R. Raman, Maninder Kaur Dwivedi, S. S. Kar, H. B. Kindo and R. Prasanna. The last-mentioned was particularly helpful in organising our field trip to Jagdalpur and adjacent places, along with other helpful functionaries there. We would like to stress that there were a large number of other officials who extended their help and co-operation liberally, and our failure to mention their names here does not in any way reflect on their contribution to the completion of this study.

M. Govinda Rao, Director, National Institute of Public Finance and Policy provided all possible support to the research team. Diwan Chand and Geeta Bhatnagar helped with data on state finances while Sandip Biswal, Narendra Jena and Krishanu Karmakar were both willing and able as research associates. For all of them, we record here our thanks.

Rita Wadhwa, Suresh Sharma and Kavita Issar (our publication team) have done their utmost to maintain the technical quality of this publication at a high level. While thanking them, we add the usual rejoinder that any error of omission or commission in the contents of this publication is the responsibility of the authors alone.

Authors

Contents

I. Overview 1
1. The state of Chhattisgarh 1
2. Public Finances 3

II. Poverty and Public Interventions for the Poor 6
1. Direct Poverty Alleviation Programmes 6
2. Schemes for Employment Generation 6
3. SGSY 8
4. Housing: *Indira Awas Yojana* (IAY) 10
5. Budgetary Expenditure for the Poor: Classification by Intent 11
6. Additional Fund Requirement for Wage Employment 14
7. Additional Resources Required for Housing 15
8. Additional Resource Requirement for Social Security 16

III. Health: Achievements, Public Interventions and Financing Issues 18
1. Achievements 18
2. Factors affecting achievements of the health sector 22
3. Public expenditure on health and related services in Chhattisgarh 24
4. Expenditure requirement in health and other related services in the state 26
5. Distribution of the benefits of public expenditure 28
6. Conclusions 30

IV. Elementary Education in Chhattisgarh 31
1. Introduction 31
2. Enrolment 33
3. Infrastructure 36
4. Quality of Education 38
5. Dropouts and out-of-school children 39
6. Government expenditures on elementary education 41
7. Mid-day Meals 44
8. Estimation of resource requirements to fill the gaps 46

V. Financing Additional Requirements 49

I. OVERVIEW

1. The state of Chhattisgarh

Chhattisgarh is one of the youngest states of the nation formed in November 2000, comprising the 16 eastern districts of the undivided Madhya Pradesh; it has borders with Madhya Pradesh (as at present), Uttar Pradesh, Jharkhand, Orissa, Andhra Pradesh and Maharashtra. With a geographical area of more than 136,000 sq km, Chhattisgarh is the ninth largest state in India, but its population of a little more than 20 million results in a population density of only 154 persons per sq. km. However, given that more than 44 percent of the area of the state is under forests with little habitation in the forests, the effective density of population outside the forest areas would be substantially higher. About 80 per cent of its citizens live in rural areas. 32 percent of the population consists of indigenous people or tribals (scheduled tribes or ST for short), while more than 11 percent is comprised of scheduled castes (SC). Thus, more than 43 percent of the population of the state are what are known to be disadvantaged groups.

The state can be sub-divided into three distinct regions – the northern hills (two districts), the Bastar plateau in the south (three districts) and the central plains (11 districts). The northern and the southern parts of the state are heavily forested and the majority of the inhabitants of these five districts are the tribals. The state has abundant water resources with Mahanadi as the major river flowing across the central plains of the state, and several other rivers providing fairly assured supply of water. The central part is considered fertile land for agriculture and is known as the 'rice bowl' of central India. A large part of the population is also concentrated in the central plains with agriculture as their main occupation. In fact, 80 percent of the population is dependent upon agriculture and allied activities in the state. But the state has plenty of other natural resources, primary among them minerals and non-timber forest products (NTFP). The mineral wealth of the state includes all major minerals (including diamonds) and several minor minerals, while it has more than 200 types of NTFP including some rare herbs with medicinal properties reported to be unique to the state's forests.

The state's sex ratio at 989 (per 1000 males) is higher than that for India as a whole, but there are clear signs of gender gaps in several areas, the most obvious being that in literacy rate: while the overall literacy rate is about 65 percent, male and female literacy rates are 77 and 52 percent. Most other indicators of human development in the state are worse than the average for the country despite steady improvement in recent years; for example, infant mortality rate at 61 in 2006 is higher than the country average of 57. The state has also been identified as a food-deficit state. Poverty level in the state is high (only Orissa and Madhya Pradesh have higher poverty levels) at about 41 percent (2004-05). The relative status of the state in terms of these indicators of social progress was summed up by the 12th Finance Commission by placing Chhattisgarh in the fourth category (out of five) of 'lower middle' human development. It may be of interest to note that it was placed in the 'low' category with respect to physical infrastructure, indicating an even lower relative rank.

The level of poverty is reflected in the relatively low per capita income (NSDP for the state and NNP for India) of the state, which was Rs. 16980 in 2006-07 (at 1999-2000 prices) as against Rs. 22553 for India as a whole. Figure 1.1 depicts the trends in GSDP and per capita income (NSDP) in recent years. It can be seen from

the figure that growth in both the variables was not particularly strong during 1999-2003, but picked up after that period, in line with the strong growth performance of the country as a whole.

Figure 1.1

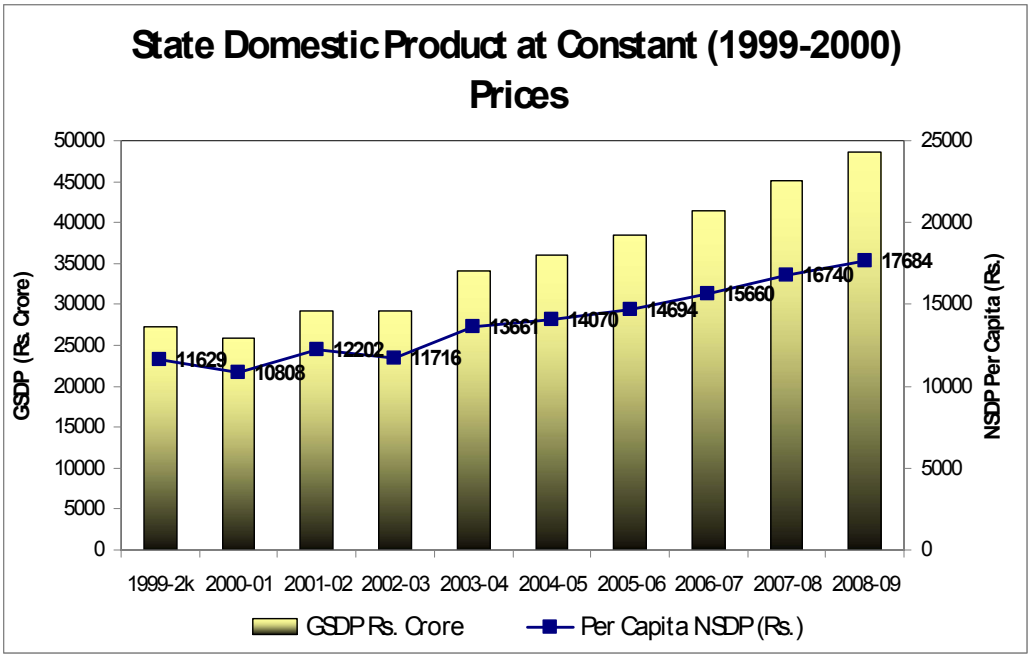
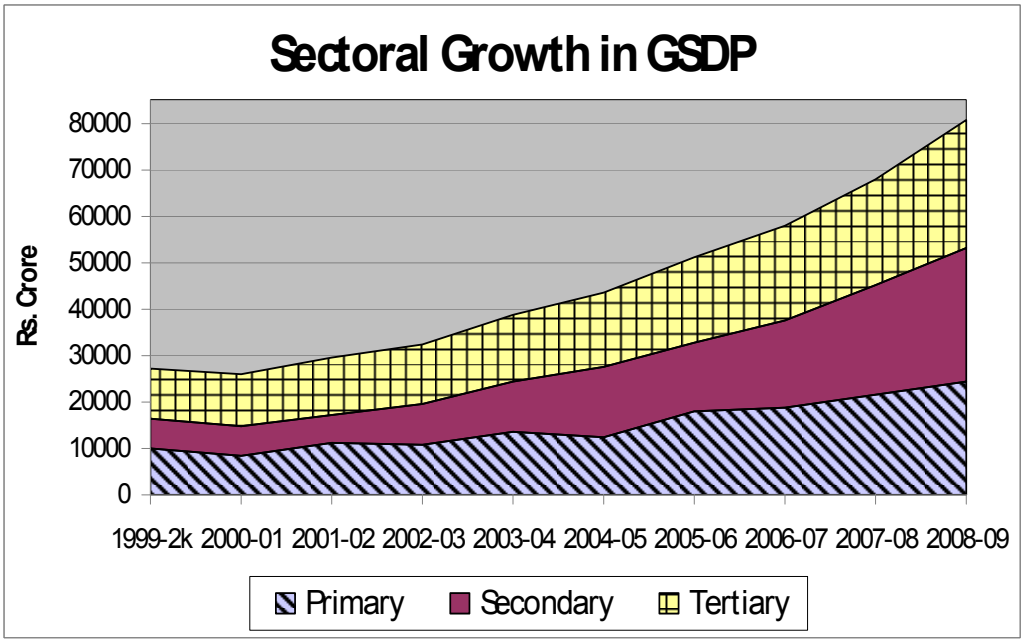


Figure 1.2



Primary and tertiary sectors are the larger ones within the total GSDP, with the secondary sector being comparatively small (Figure 1.2). However, the secondary sector is coming into its own since 2003-04 with a distinctly higher growth as compared to the previous period, although the other sectors also exhibit higher

growth in the post 2003 period as compared to the earlier years. The composition of GSDP has changed a little since the inception of the state as a result. Both primary and tertiary sectors have yielded a small share of the GSDP to the secondary sector. The latter logged a share of 23.4 percent in 1999-2000 rising to 25 percent in 2002-03 and further rising to 27.9 percent in 2006-07. This was only to be expected because one of the development options available to the state was to exploit its abundant mineral wealth to a greater extent, facilitating as much value added as possible on the mineral produced within the state. This policy had relatively little opposition with influential 'voice', and was also facilitated by the liberalised economic regime. As such, a significant amount of new industrial activity has taken place in the state (as in other mineral-rich states of Orissa and Jharkhand) mainly in mineral-based industries, and this trend is expected to continue for some time. It should be noted that the share of tertiary activities is not likely to drop much for various reasons including (a) a general trend of rising services sector and (b) the robust trading sector in Raipur (the capital city), the trading hub for a large catchment area comprising the entire state of Chhattisgarh, eastern parts of Madhya Pradesh and a substantial part of Western and Southern Orissa. In contrast, the primary sector can grow only slowly (land, the major asset, is more or less fixed in supply) with higher utilisation of inputs like water and fertiliser and better crop management.

In this context, it may not be out of place to mention that the Vision Document of the state aims at development of agriculture, minerals, industry, and forestry sectors simultaneously. However, while recognising the complementarity between mineral and industry sectors, it completely ignores the trade-off between these two sectors on the one hand and both agriculture and forests sectors on the other, and to a smaller extent, between the latter two sectors as well. The trade-offs are by no means inevitable: but these strong possibilities have to be recognised and appropriate policies and actions to obviate such trade-offs need to be adopted. It is in this task of appreciating the difficult issues and thinking ahead about concrete policies to deal with them that the Vision Document is found wanting.

2. Public Finances

Chhattisgarh has not had the kind of fiscal difficulties that have been observed in several other states of India in the last eight years since it came into being. It has had a maximum fiscal deficit of 5.7 per cent of the GSDP in 2003-04; between 1999-2000 and 2007-08, fiscal deficit has been negligible in two years, below 3 percent in two years and small fiscal surpluses in another two years (Figure 1.3). During the same period, it has had revenue surplus in five years, and revenue deficits below 2 percent in all other years. Further, excepting the very first part-year, expenditures have not fluctuated in line with deficits/surpluses, but have been relatively steady within a band between 18-20 percent of the GSDP. In fact, an expenditure level of almost 20 percent of GSDP has been achieved in 2006-07 with a significant revenue surplus of about 4.6 percent of GSDP and a negligible fiscal deficit. Clearly, as things stand now, desirable expenditures in the state should not be unduly constrained by availability of resources, although this does not argue for jettisoning expenditure controls.

One particular development has the potential of significantly affecting the state finances adversely – the salary revisions initially announced by the central government and subsequently followed by the state. This has in the past resulted in similar revisions at the state level and has undone much of fiscal prudence preceding it. Also, there are usually electoral cycles in expenditure; the spurt in expenditure close to election times is rarely accompanied by a commensurate increase in revenue (generally the opposite because of higher tax expenditures), causing a

sharp deterioration in fiscal balance. Because of these factors, Chhattisgarh needs to guard against fiscal complacency. However, as things stood at the end of 2008-09, the state had the necessary fiscal space to launch a special effort for human development.

Figure 1.3

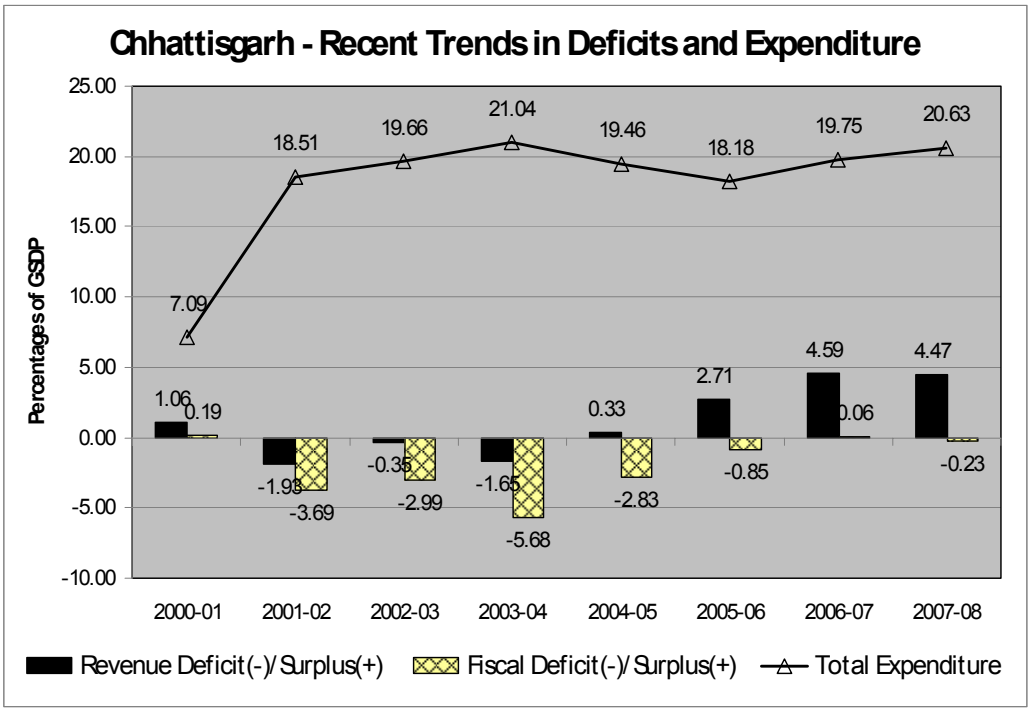
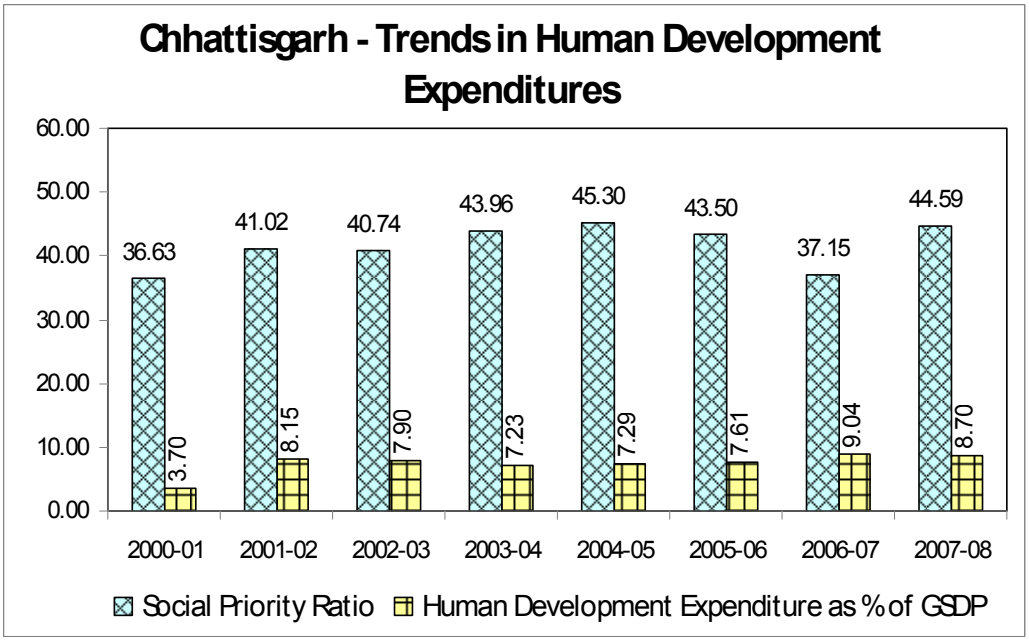


Figure 1.4



Human development expenditures in the state have also been more than comparable with high achiever states, and apart from the first year, significantly higher than the parent state of Madhya Pradesh at 7-9 percent in most years (Figure 1.4). The social priority ratio – measuring the share of expenditure on basic services like primary education and primary health in the total – has been a little smaller than many other states, and declined between 2004-05 and 2006-07. This trend in a state with low human development and significant ground to cover in the basic services needed to be reversed. The ratio in 2007-08 did exhibit a reversal of the trend to almost 45 percent. Based on experience elsewhere, it is suggested that this ratio should be maintained at around 45 percent or higher until the basic services are satisfactorily taken care of, at least from the supply side.

II. POVERTY AND PUBLIC INTERVENTIONS FOR THE POOR

1. Direct Poverty Alleviation Programmes

Possibly because of resource constraints, the major direct poverty alleviation schemes are only those under centrally sponsored schemes in Chhattisgarh. Prominent among them in terms of scale of operations are Sampoorna Grameen Rozgar Yojana (SGRY), National Rural Employment Guarantee Act (NREGA), Swarnajayanti Gram Swarozgar Yojana (SGSY) and Indira Awas Yojana (IAY). The performance of each of these schemes is summarised below along with a brief assessment.

2. Schemes for Employment Generation

2.1 SGRY

SGRY was a wage-employment programme launched by the central government in 2002 for the rural sector. Its primary objective was to provide wage employment to all rural poor who were in need of it and desired to do manual and unskilled work in and around their village/habitat. The programme ws self-targeting in nature with preferences given to the agricultural wage earners, non-agricultural unskilled wage earners, marginal farmers, women, members of Scheduled Castes/Scheduled Tribes, parents of child labour withdrawn from hazardous occupations, parents of handicapped children and adult children of handicapped parents who are desirous of working for wage employment.

The wage payment had both cash and kind (food grains) components. The programme was implemented as a centrally sponsored scheme on the basis of cost sharing between the centre and the states in the ratio of 75:25 with respect to the cash component of the programme. Foodgrains were provided to the states free of cost. The performance of this programme in Chhattisgarh can be initially assessed from the data provided by the state government on its physical and financial progress.

Table 2.1: Physical and Financial Progress and Utilisation under SGRY

	2004-05	2005-06	2006-07*
Releases during the year (Rs. lakh)	17242.22	21803	6542.08
Centre	12931.67	16605.79	4853.78
State	4310.55	5197.21	1688.30
Total funds available (Rs. lakh))	19431.61	23562.54	7178.05
Total expenditure (Rs. lakh))	17757.39	21190.48	7040.38
Utilisation (%)	91.38	89.93	98.08
Employment generated (lakh man-days)	348.84	256.8	83.58
SC	56.33	43.33	20.62
ST	154.14	112.72	24.42
Others	138.37	100.75	38.54
Expenditure for generating a man-day (Rs.)	50.90	82.52	84.24

Source: Government of Chhattisgarh ***Note***: * Scheme gradually replaced by NREGA

It is obvious that with the onset of the NREGA, funds channelled through SGRY have shrunk since 2005-06. The total receipts of the state as well as total availability of funds increased substantially from Rs 194 core in 2003-04 to Rs 236 crore in 2005-06 and then declined in 2006-07 due to implementation of NREGA. Though there was an increase in expenditure from 2004-05 to 2005-06, number of man-days generated declined from 349 lakh in 2004-05 to 257 lakh in 2005-06 although utilisation level declined only marginally from around 91 percent to 90 percent during the same period. From 2005-06 SGRY was gradually replaced by NREGA and we can notice the substantive decline in SGRY expenditure in 2006-07 with expansion of NREGA.

Table 2.2: Employment Status and Expenditure Under NREGA in Chhattisgarh

Particulars	**2006-07**	**2007-08**	**2008-09**
Employment status			
1. Number of household given job cards	1848766	1966996	3354795
of which, Scheduled Castes	216964	426767	495963
% of Scheduled Castes in job cards issued	11.74	21.70	14.78
Scheduled Tribes	889721	1179077	1333894
% of Scheduled Tribes in job cards issued	48.13	59.94	39.76
2. Number of households demanding employment out of (1)	1282794	1835562	2271194
3. Employment provided under NREGA out of (2)	1256737	1834149	2270415
4. Individual applicants out 3	1048383	1601661	
5. Women applicants out of 4	398276	622505	
6. Households completing 100 days of employment	130302	86900	251674
7. Scheduled Castes out of 4	202493	265167	
8. Scheduled Tribes out of 4	566985	827982	
9. Total man days generated (lakh man days)	700.21	884.69	1243.19
10. Man days generated for SCs (lakh man days)	84.08	132.86	203.96
(10) as % of (9)	12.01	15.02	16.41
11. Man days generated for STs (lakh man days)	318.98	375.58	513.65
(11) as % of (9)	45.55	42.45	41.32
12. Man days generated for women (lakh man days)	275.29	371.26	589.69
(12) as % of (9)	39.32	41.96	47.43
Expenditure (Rs. lakh)			
1. Releases from centre	70130.74	104726.60	163216.94
2. Releases from state	7748.72	8356.26	18268.53
3. Total funds available including OB and misc. receipts	84088.78	135769.14	197358.76
4. Total expenditure, of which	66882.16	94721.42	143447.58
5. on unskilled wages	43156.49	60143.65	91005.65
6. on skilled wages	1904.83	2828.84	2377.61
7. on material	20772.26	29732.24	45968.20
8 on contingency	1048.58	2016.69	4096.12
9. Utilisation of available funds (%)	79.54	69.77	72.68
10. Share of state's contribution in total releases [2/(1+2)] (%)	9.95	7.39	10.07

Source: www.nrega.nic.in

2.2 NREGA

In Chhattisgarh, 15 districts (11 in first phase and another 4 districts in the second phase) out of 18 had been initially identified for the implementation of the NREGA in 2006-07 and 2007-08. Given the high incidence of poverty in the state, it is hardly surprising that the programme covered the bulk of the state from the initial stages; after all, the districts selected for the initial implementation of the programme across the country were chosen precisely on the basis of relatively high incidence of poverty. The remaining three districts of the state have also been added for the implementation of NREGA with the rollout of the programme across the entire country.

Employment status and expenditure under NREGA in Chhattisgarh in the years 2006-07 to 2008-09 is given in Table 2.2. Number of job cards issued increased from 18.5 lakh in 2006-07 to 19.7 lakh in 2007-08, of which Scheduled Tribes constituted around 60 percent and scheduled castes 22 percent; the remaining were from other communities. In 2007-08, households demanding employment increased to 18.4 lakh from 12.8 lakh in 2006-07. In both years, almost all the households demanding employment were provided with employment but the number of households getting 100 days of employment was a mere 0.8 lakh in 2007-08. The employment generation in man-days was 7 and 8.8 crore respectively in these two years, while utilisation of funds available was more than 80 percent and 70 percent respectively. There was a qualitative change in 2008-09, although in effect only three districts were added to the coverage of the programme. Households given job cards jumped from 19.7 lakh to 33.5 lakh, i.e. by about 70 percent but the state was unable to increase man-days generation commensurately – it increased from 8.8 crore to 12.4 crore, i.e. by less than 50 percent. It may also be noticed that the additional coverage brought down the percentage of ST beneficiaries of the programme in the total, obviously because the newly included districts had much smaller percentage of STs in their population. A little more than 40 percent of man-days of employment generated were appropriated by women. The state government contributed around 9 percent of the total releases in 2006-07, which increased to a little more than 10 percent in 2008-09. The utilisation and the state's contribution in 2007-08 were smaller, possibly because of inadequacies in the gearing up of the administrative machinery that was called for with the inclusion of additional districts under NREGA.

Available assessments[1] of the scheme indicate low levels of awareness, poor levels of transparency including maintenance of muster rolls, irregularities with job cards and wage payments and occasionally poor selection of works undertaken. However, there were undeniable positives such as higher food security, better status of women, less need for migration and consequent disruptions – better quality of life for the beneficiaries in a nutshell. The potential benefits are clearly much larger.

3. SGSY

The IRDP, TRYSEM, DWCRA and other schemes were restructured into a single programme and launched with the name Swarnajayanti Gram Swarozgar Yojana (SGSY) in 1999. The scheme is implemented by the financial institutions, *Panchayati Raj* institutions, District Rural Development Agencies (DRDA), non-government organisations (NGOs), and technical institutions in the district. These institutions are also involved in the process of planning, implementation and monitoring of the scheme. The scheme incorporates help from the NGOs in certain

[1] *See*, "NREGA Survey Report: May,2008"
(url: http://www.righttofoodindia.org/data/nrega08udaipur.doc)

areas where there is an active participation by them in the formation of self help groups (SHGs) as well as in the monitoring of the progress of the Swarozgaris, the beneficiary individuals/households.

The scheme targets the poorest of poor and is designed for establishing a large number of micro enterprises in the rural areas. The list of BPL households identified through BPL census duly approved by Gram Sabha forms the basis for identification of families for assistance under SGSY. The objective of SGSY is to bring assisted families above the poverty line within three years by providing them income-generating assets through a mix of bank credit and government subsidy. The rural poor such as those with land, landless labour, educated unemployed, rural artisans and disabled population are covered under the scheme. Thus, the basic idea here is to develop sustainable income generating self-employment by the beneficiaries instead of providing them with jobs. Thus, it is complements a programme like SGRY/NREGA that has job creation and provision as its primary objective.

SGSY specifically focuses on the vulnerable section of the rural poor. Accordingly, the scheme provides for reservation for the SC/ST (of at least 50 per cent), for women (40 per cent) and the disabled (3 per cent) among those assisted.

Table 2.3: Financial Progress under SGSY

(Rs. Lakh)

	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
Releases during the year	1994.79	1900.19	2908.42	2738.39	3567.98	3494.16	4129.14	6252.53
Centre	1532.86	1467.21	2203.83	2025.44	2676.11	2633.15	3095.33	4735.78
State	461.93	432.98	704.59	712.95	891.87	861.01	1033.81	1516.75
Total funds available	6060.11	3915.89	3547.24	3238.31	4174.47	4038.86	4695.29	6637.73
Total expenditure	4815.87	3887.9	3510.7	2875.32	3863.97	3740.3	4677.29	6529.53
Utilisation percentage	79.47	99.29	98.97	88.79	92.56	92.61	99.62	98.37
Expenditure on								
Subsidy	2152.95	2617.27	2546.73	2204.86	2683.96	3020.11	3358.59	5065.82
Revolving fund	406.9	247.8	71.79	179.09	64.29	74.78	79.36	
Infrastructure	1143.64	607.54	512.2	332.38	490.51	712.19	969.25	
Training	305.24	220.67	65.23	81.19	137.74	101.47	86.07	
Other	807.14	194.62	314.75	77.8	487.47	130.31	184.02	

Source: Government of Chhattisgarh

An analysis of the financial progress of SGSY in Chhattisgarh (Table 2.3) shows that over the years, the total release towards the scheme has been between Rs. 20 crore to Rs. 62.53 crore between 2000-01 and 2007-08. The utilisation levels are between 79 percent and 100 percent during these years. About 60 to 70 percent of total expenditure is subsidy to the beneficiaries; another major item of the expenditures under the programme is that on infrastructure development. The expenditure on training for development of various skills among the beneficiaries was less than a crore in 2006-07 and has been declining. More should be done on training and particularly on marketing. The unmistakably changing pattern of expenditures under the programme is clearly favouring subsidies at the cost of everything else. It may be argued that this trend simply means a greater attention to the main objective of the programme. But it could also imply leakage of funds to unintended beneficiaries at the cost of expenditures that would be complementary to

the subsidies in the sense that those expenditures would create conditions for better and more effective absorption of the subsidies and improve the sustainability of the micro-enterprises created. It has also been observed that the relatively low penetration of bank branches (as also low level of involvement of bankers) in the state somewhat limits the coverage of the scheme in Chhattisgarh. Problems with poor and uninformed selection of projects and (perhaps consequently) low (unsustainable) rates of return have also been pointed out.

4. Housing: *Indira Awas Yojana* (IAY)

Poverty is usually characterised by lack of employment; it is also accompanied by lack of basic necessities like food, housing and potable water supply. When poverty is widespread, it also means a social structure that does not provide any security from deprivation of basic necessities. While the various self-employment and wage employment policies (currently SGRY/NREGA, and SGSY) try to tackle the problem of lack of adequate employment and income generation, the state policies of IAY, PMGSY, old age pension schemes, etc have been introduced to tackle the manifold problems of housing, social assets and social security network for the elderly and other non-working but unsupported population.

In this section, the focus would be on the housing conditions and the performance of the centrally sponsored scheme of IAY for providing housing to the rural poor. Before we start analysing the performance of the IAY, it is important to have a look at the housing conditions of the population in rural Chhattisgarh. The Census of India provides detailed estimates of the number of houses according to the condition of houses. The census houses are divided into good, livable and dilapidated houses based on the perception and response given by the respondent. The 1991 definition of census into *kutcha*, semi-*pucca* and *pucca* has been transformed into these there categories. The housing scheme needs to cater to the dilapidated and the livable category of houses in terms of construction of new houses and upgradation of existing structures.

As per Census 2001, there are nearly 1.17 lakh households living in dilapidated houses, 18.09 lakh households in livable houses, and the remaining 21.12 lakh households living in pucca houses. These numbers do not include completely homeless households.

Table 2.4: Financial Performance under IAY

(Rs. Lakh)

	2005-06	2006-07	2008-09	2009-10 (P)
Releases during the year (Rs.)	4919.28	5348.3	11252.49	15183.48
Centre	3669.71	4011.27	7640.18	8151.2
State	1249.57	1337.03	2457.25	3557.56
Total funds available	5227.74	5589.67	10413.35	35075.65
Total expenditure	5043.72	5334.44	10733.47	18384.86
Utilisation percentage	96.48	95.43	103.07	52.41
Total number of houses constructed (no.)	17646	17892	30023	14931
Share of expenditure on SCs (%)		20.02	17.75	22.47
Share of expenditure on STs (%)		45.39	38.55	36.32
Share of Others (%)		34.59	43.7	41.21

Source: Government of Chhattisgarh ***Note***: 2009-10 figures are projected

The data on physical and financial performance of IAY (Table 2.4) provide the number of houses constructed and the expenditure involved. The Government of Chhattisgarh has provided for construction of over 17,000 new houses with an expenditure of Rs. 50-53 crore approximately in 2005-06 and 2006-07. On average, more than 18,000 new houses have been constructed every year since 2001-02 totalling 147632 houses till March 2010. The utilisation levels are above 95 percent on average. Since the number of new houses built from 2001-02 is already greater than the number of families living in dilapidated houses as per the last census, continuation of IAY for another few years should cover all the households in that category, unless the number of new additions to that category is very large. We have not examined the case of households living in other categories of houses (which would probably correspond to the upgradation assistance under IAY) here.

5. Food for the Poor

The high percentage of poor households in the state naturally raises concerns about the most basic necessity – food. While World Food Programme mapped the state in the past as one with serious vulnerabilities in this area, relatively good coverage of the public distribution system (PDS), particularly the targeted one (TPDS), along with supplementary state level programmes appear to have eased the vulnerabilities somewhat in recent times. The system in the state covers those below poverty line (BPL) as well as those above (APL). Additionally, there are beneficiaries under the *Antyodaya* and *Annapurna* programmes. In 2008, there were about 27 lakh APL card holders, 7 lakh BPL card Holders, 7 lakh *Antyodaya* card holders and 28 thousand *Annapurna* card holders in the state. The sale of foodgrains to the categories other than APL was around or above 90 percent of the allocations. But in the APL account, while there was sale of wheat to the tune of about a quarter of the allocations, practically no one from this category purchased rice from the PDS. The state schemes essentially cover vulnerable families which may not be covered under the PDS. There are more than 10,000 fair price shops, run mostly by *Panchayats*, SHGs and co-operatives. From all accounts, the system now works well with several innovations like sale of PDS foodgrain at local markets on fixed dates (*haat*s) and assisted by the IT network that helped weed out a large number of bogus ration cards. Movement of foodgrains are also closely monitored to prevent diversions and complaints are promptly attended to, with serious follow-up action. As a result, customer satisfaction is reasonably high.

6. Budgetary Expenditure for the Poor: Classification by Intent

In this section, we examine recent trends in government expenditure, classifying it into three somewhat arbitrarily defined categories of administrative expenditures, development-oriented expenditures and pro-poor expenditures. While the first is essentially defined as commonly understood[2], the second covers those expenditures that are primarily intended to enhance the productive capacity of the state, e.g., on infrastructure. Thus, the impact of this type of public expenditure on the poor is expected to be indirect through the overall development of the state, somewhat akin to the 'trickle-down' theory. The last category includes those expenditures that are directly intended to alleviate poverty, either through transfer payments or through enhancement of capacity of selected poor/ backward groups. The classification is based on available information in the budget and some prior knowledge about various schemes. Obviously, there are several borderline cases,

[2] It may be noted that this category includes interest payments.

which have been resolved with subjective judgment, and therefore the classification can only be called indicative. Details of the procedure adopted are given in Sen and Chand (2004). The basic purpose of this classification exercise is to form a rough idea about the focus of the government on the route chosen to better the conditions for the poor.

Table 2.5: Classification of Government Expenditure in Chhattisgarh

Description	Amount (Rs. lakh)			Shares in respective totals		
	2003-04	2004-05	2005-06	2003-04	2004-05	2005-06
A. Revenue expenditures	649498	703754	725220	100.00	100.00	100.00
i. Pro-poor programmes	187643	207422	235822	28.89	29.47	32.52
ii. Development-oriented programmes	226614	224382	247762	34.89	31.88	34.16
iii. Administrative services	235241	271951	241636	36.22	38.64	33.32
B. Capital outlay	101549	127913	128151	100.00	100.00	100.00
i. Pro-poor programmes	42183	48720	61911	41.54	38.09	48.31
ii. Development-oriented programmes	57185	76265	63483	56.31	59.62	49.54
iii. Administrative services	2180	2927	2757	2.15	2.29	2.15
C. Loans and advances	54777	11026	32586	100.00	100.00	100.00
i. Pro-poor programmes	50	6	0	0.09	0.06	0.00
ii. Development-oriented programmes	52027	8320	29886	94.98	75.46	91.71
iii. Administrative services	2700	2700	2700	4.93	24.49	8.29
D. Total expenditure	805824	842693	885956	100.00	100.00	100.00
i. Pro-poor programmes	229876	256148	297733	28.53	30.40	33.61
ii. Development-oriented programmes	335827	308968	341131	41.67	36.66	38.50
iii. Administrative services	240121	277578	247092	29.80	32.94	27.89

Source: Own computations based on budgetary data from *Finance Accounts* for the three years.

Table 2.5 presents the results of our classification exercise for the years 2003-04, 2004-05 and 2005-06. The pro-poor expenditure is around 30 percent of total expenditure in all years, but fluctuating. The share of pro-poor expenditure is higher in capital expenditure than in revenue expenditure, which is surprising, since much of the capital expenditure is usually on infrastructure, and that normally gets classified as development oriented. The odd result is because of two reasons: first, the share of scheduled tribe population is higher in Chhattisgarh compared to other states and hence expenditure (including capital expenditure) on Tribal Sub-Plan is higher, all of which gets classified under pro-poor spending. Second, the administrative expenditures are small in capital expenditures, and hence pro-poor expenditures and development-oriented expenditures both have a higher share in capital expenditures as compared to revenue expenditures. Administrative expenditures are large but less than 30 percent except in the year 2004-05. Overall, development oriented expenditure has a larger share in total expenditures than pro-poor expenditures, indicating a relative emphasis on growth, not surprising in a new state. Net lending is mainly for development oriented expenditure. In the total expenditures, pro-poor expenditures exhibit a rising trend, though three years is too small a period to determine a trend. With high levels of poverty and high proportion of tribal population it is possible that the government is giving higher priority to pro-poor expenditure in the recent past. Net lending is almost negligible for pro-poor activities.

Table 2.6: Government Expenditure on Social Services in Chhattisgarh

Description	Amount (Rs. lakh)			Shares in respective totals		
	2003-04	2004-05	2005-06	2003-04	2004-05	2005-06
A. Revenue expenditures	223152	243072	273848	100.00	100.00	100.00
i. Pro-poor programmes	169030	186801	210383	75.75	76.85	76.82
ii. Development-oriented programmes	46869	48199	55548	21.00	19.83	20.28
iii. Administrative services	7253	8072	7917	3.25	3.32	2.89
B. Capital outlay	18546	25572	36732	100.00	100.00	100.00
i. Pro-poor programmes	11727	14314	24469	63.23	55.98	66.62
ii. Development-oriented programmes	6819	11257	12263	36.77	44.02	33.38
iii. Administrative services	0	0	0	0.00	0.00	0.00
C. Loans and advances	924	1783	4053	100.00	100.00	100.00
i. Pro-poor programmes	50	6	0	5.39	0.34	0.00
ii. Development-oriented programmes	874	1777	4053	94.61	99.66	100.00
iii. Administrative services	0	0	0	0.00	0.00	0.00
D. Total expenditure	242622	270427	314633	100.00	100.00	100.00
i. Pro-poor programmes	180807	201121	234852	74.52	74.37	74.64
ii. Development-oriented programmes	54562	61234	71864	22.49	22.64	22.84
iii. Administrative services	7253	8072	7917	2.99	2.98	2.52

Source: As in Table 2.5

One would expect much of the expenditures on social services to be targeted towards the poor – Table 2.6 confirms the *a priori* expectation. About two thirds of the expenditures on social services are oriented directly towards the poor at least by intent. Pro-poor expenditure under revenue expenditure category is above 75 percent of the total whereas it is about two-thirds in capital outlay (the shares of capital outlay and net lending are small in social services). The pro-poor lending in social services has been negligible in 2004-05 and nil in 2005-06. There is almost a self-selection favouring the poor in the context of government expenditure under social services; although not necessarily intended, much of the incidence of public expenditure on social services is on the poor. This is because the well-off tend to favour paid private supply of most of the services (education or health, for example). Properly measured, this aspect would raise the share of the poor in expenditure on social services even higher, but our analysis does not go into incidence of government expenditure as such.

The share of pro-poor expenditure is considerably lower in the case of economic services, and that of growth-oriented expenditures is considerably larger (Table 2.7). This is to be expected, since most of the expenditures under economic services are on physical infrastructure and have no direct benefit for the poor unless specially targeted. But here, unlike in other states, the share of pro-poor expenditures in capital outlay is around 35 percent and is lower in revenue expenditure. This is a surprising result, again explained by the large capital expenditures under Tribal Sub-Plan, all of which we categorise under pro-poor. However, one has to examine in detail whether all the expenditure classified under the Tribal Area sub-plan, though intended to be for poor and socially backward, does benefit the intended group or not. This is a task we have not undertaken here.

Table 2.7: Government Expenditure on Economic Services in Chhattisgarh

Description	Amount (Rs. lakh)			Shares in respective totals		
	2003-04	2004-05	2005-06	2003-04	2004-05	2005-06
A. Revenue expenditures	188853	190555	204630	100.00	100.00	100.00
i. Pro-poor programmes	18613	20621	25439	9.86	10.82	12.43
ii. Development-oriented programmes	154583	151851	159974	81.85	79.69	78.18
iii. Administrative services	15657	18083	19217	8.29	9.49	9.39
B. Capital outlay	80823	99414	88662	100.00	100.00	100.00
i. Pro-poor programmes	30457	34406	37441	37.68	34.61	42.23
ii. Development-oriented programmes	50366	65008	51221	62.32	65.39	57.77
iii. Administrative services	0	0	0	0.00	0.00	0.00
C. Loans and advances	51153	6543	25833	100.00	100.00	100.00
i. Pro-poor programmes	0	0	0	0.00	0.00	0.00
ii. Development-oriented programmes	51153	6543	25833	100.00	100.00	100.00
iii. Administrative services	0	0	0	0.00	0.00	0.00
D. Total expenditure	320829	296512	319125	100.00	100.00	100.00
i. Pro-poor programmes	49069	55027	62881	15.29	18.56	19.70
ii. Development-oriented programmes	256102	223402	237027	79.83	75.34	74.27
iii. Administrative services	15657	18083	19217	4.88	6.10	6.02

Source: As in Table 2.5

Overall, the classification exercise does turn up something unexpected with respect to the strategic choice of the route of public interventions for development; while there seems to be a relative preference for the route of economic growth, there also seems to be some amount of redistributive strategy built into the pattern of public investment. The state is somewhat unique among the ones we have analysed so far in this respect. In general, the pattern that emerges is that of higher share of pro-poor expenditures in states with high levels of poverty and relative emphasis on growth if poverty levels are not so high. In Chhattisgarh, despite fairly high levels of poverty, public expenditures expected to benefit the poor directly are less than those expected to help growth of the economy (and only indirectly benefit the poor). A possible reason could be the status of the state as a relatively new one. With strong development aspirations of the citizens, public policy stance may be reflecting these aspirations more strongly than the compulsions of poverty alleviation.

7. Additional Fund Requirement for Wage Employment

The Government of Chhattisgarh could generate 1243.19 lakh person-days with a cash expenditure of Rs 1434.48 crore in 2008-09 under NREGA. Nearly 71.5 lakh rural persons were below the poverty line in 2004-05; that is around 13.24 percent of rural population. A simple calculation based on the NREGA norms of 100 person-days with Rs 80 as the wage rate shows that if the Government of Chhattisgarh continues to provide wage employment at the level of 2008-09 under NREGA, the state should not need any additional funding to cover all the BPL households.

Based on the expenditure pattern of NREGA in Chhattisgarh, the state on average contributes 10 percent of total expenditure towards contingency. Assuming that one person from each poor household would have to be provided an unskilled job and blowing up the required unskilled wage expenditure with the prevailing ratio of unskilled wages to total expenditure allows us to estimate total expenditure under NREGA at Rs. 1669.61 crore. With the assumption of 10 percent state's contribution in total expenditure, state's resource requirement for wage employment works out to

Rs. 166.96 crore. State government's share in total NREGA expenditure in 2008-09 is higher at Rs. 182.69 crore and the additional resource requirement would thus be nil towards providing wage employment to one person from each poor rural household under NREGA. This calculation, it should be noted, leaves out demand for jobs from APL households, not barred from the benefits of the scheme.

Table 2.8: Resources Required for Wage employment in Chhattisgarh

	In Lakh	Poverty Ratio
Population below Poverty Line in rural areas	71.5	40.8
Total number of households below Poverty Line (Household size: 5.4)	13.24	
Man days required to be generated	1324	
Total funds required for wages (@ Rs. 80 per day) Rs. lakh	105920	
Financial performance of NREGA		
Expenditure under NREGA 2008-09 (Rs. lakh)	143448	
Employment generated for unskilled labour	1243.19	
Wage expenditure under wages for unskilled labour (Rs. lakh)	91005.65	
Share of unskilled wages to total expenditure (%)	63.44	
Total funds required for unskilled wages (Rs. lakh)	105920	
Total expenditure needed under NREGA to meet above wages * (Rs. lakh)	166961	
State's contribution towards NREGA (10% of the total expenditure)** (Rs. lakh)	16696	
State's actual expenditure in 2008-09 (Rs. lakh)	18269	
Estimated additional resource requirement from the state (Rs. lakh)	**-1573**	

Notes: * Estimation included Skilled wages, Material and Contingency expenditure
** Based on previous year's allocation; state's contribution towards 10 percent of material and skilled wages and entire contingency works out to be 10 percent of total expenditure under NREGA

We assume the number of poor families and coverage of wage employment schemes to be roughly the same at present as in 2008-09, and that full coverage of all poor families is attempted from 2009-10 under NREGA. What the numbers above show is that the present level of expenditures is adequate to cover one person from each household in the BPL category in the state. Any additional requirement of funds would thus be because of further increase in wage rates, or further demand for jobs from the APL households, or covering more than one person from the BPL households. We do not consider any of three possibilities for the computation of additional resource requirements that are therefore are taken to be nil.

8. Additional Resources Required for Housing

As discussed above in section 4, the current level of expenditure under IAY should be enough to cover the entire population living in dilapidated houses (as per the Census 2001). It will now be necessary to cover only those households that have entered this category after 2001 as also the next group – those who are living in 'livable' houses which do not have either proper walls or roof. The Government of Chhattisgarh should be able to cover both these categories without any additional expenditure (over and above current level) by continuing with IAY to cover remaining households and allocating a larger share of the funds towards upgradation of houses.

Table 2.9: Profile of Aged People in Chhattisgarh in 2007 and the Resource Requirement

	Fully Dependent Elderly Population	Fully Dependent Elderly among Widows and Widowers	Percentage of Elderly with No Financial Assets	Percentage of Elderly with No property
Percentage of total elderly population	48.6	56.4	37.9	36.2
Number In lakh	4.95	5.75	3.86	3.69
Population above 65 in 2006 (lakh)	10.19			
Existing number of beneficiaries (lakh)				
Old age pensioners				1.99
Monthly pension Rs. 275				
Estimated elderly with assumption (50% of elderly with no property)				1.84
Estimated uncovered elderly population				Nil
Additional expenditure if monthly pension is increased to Rs. 400 (Rs. lakh)				249

Note: Elderly with no financial assets is the smallest number one can consider for estimated number of beneficiaries. However everyone in this group would not meet the required eligibility conditions. We assume that 50 percent of the all persons in this group meet all the required conditions for entitlement.

Source: Rajan, S Irudaya, 2006 and Census 2001

9. Additional Resource Requirement for Social Security

Under social security, the Government of Chhattisgarh gave a monthly pension of Rs. 275 to the people aged above 65, widows and widowers and the handicapped. There were in all 1.99 lakh pensioners under the old age category with Rs. 99 crore allocated for the purpose in the budget (2006-07). The state paid Rs. 275 per month as pension of which the centre contributed Rs. 200 and the state contributed the rest. Social security pension expenditure including widow pension, disability pension and Family Benefit Schemes in 2006-07 was around Rs.137.14 crore.

As per census 2001 and projections thereafter, the population of the aged in Chhattisgarh is estimated to be around 10.19 lakh in 2006. Of these, 3.69 lakh are elderly without any property (Table 2.9) and half of this (1.84) are expected to be below poverty line and dependent. As per this estimate, the expenditure incurred by the state is adequate to cover the entire aged population, provided identification of beneficiaries is correctly done. However, if the state government intends to increase the pension amount to Rs. 400 per month as in the adjacent state of Orissa, the additional fund requirement would be around Rs. 2.49 crore per annum.

Before closing this chapter, a few observations on poverty in Chhattisgarh may perhaps be in order. The carving out of Chhattisgarh as a separate state was mainly the result of developmental aspirations of the people in this state (then a region of Madhya Pradesh), which was felt to be unmet within the parent state. A large part of the population consists of tribals that originally resided in the widespread forest areas of the state or in the fringes of the forests, with very close social and economic linkages to the forests. The process of development consisting of flooding of large areas to build dams, mining and industrialisation as also the alienation from forests as a result of possibly well-meaning steps to preserve forests has seriously adverse implications for them; as a result, poverty is heavily concentrated among

them in the state.[3] Moreover, a large part of the poor population of the state are agricultural labourers by occupation (one estimate[4] puts it at above 90 percent), many of them migrating for this purpose during peak demand. Altogether, availability of suitable employment is an important determinant of the extent of poverty in the state in the short run; in the long run, the determinant remains the same, but the nature of employment must be such that it is sustainable. The latter has been conspicuous by its absence. The only positive in this respect is the public policy regarding non-timber forest product (NTFP), particularly collection and sale of *tendu* leaves. The organisation of this high-turnover business (through co-operatives of low-income, mostly ST *tendu* leaf collectors) has been more remunerative to the low-income groups concerned than in, for example, Orissa.

The *adivasi*-forest nexus is in the process of re-examination and possible re-engineering, with the top level judiciary also playing a role. This is as it should be, since it is an issue too complex to be dogmatic about. Whole social systems and ecological balances are at stake, with far-reaching consequences. However, attempts to build income earning capacity among the poor through various interventions including education and skill-formation must continue at the same time, to bring the large number of the poor in the state out of their state of deprivation. Also, major citizen-oriented public services like health, housing and water supply are important elements in reducing the deprivation of the poor and allowing them to build up human capital (Srivastava, Rao and Chakraborty, 2005), and must be oriented as much as possible towards the poor.

[3] This problem is similar to that observed in adjoining state of Orissa (*see*, Sen, Amar Nath, Choudhury and Kundu, 2008).The system of joint forest management was conceived as a corrective, but it has failed to provide real control of the forests (subject to prevalent laws) to the most adversely affected groups.

[4] Srivastava, Rao and Chakraborty (2005).

III. HEALTH: ACHIEVEMENTS, PUBLIC INTERVENTIONS AND FINANCING ISSUES

1. Achievements

In terms of standard health indicators, Chhattisgarh is marginally worse off than the all-India average. In 2008, infant mortality rate (IMR) in the state stood at 57 (as per SRS) as compared to 53 at the all-India level. In terms of maternal mortality also, although we do not have a reliable estimate, levels of institutional deliveries and aspects related to ante-natal care suggest that the state's performance in terms of MMR is likely to be worse than that of the country as a whole. However, in the recent past, the state has recorded a significant improvement (in comparison to all-India levels) in a number of indicators related to infant and maternal mortality. Between 2001 and 2008, there has been a marked decline in IMR in the state as compared to all-India level (Table 3.1). Also, between 2002-04 and 2007-08, increase in coverage of ante-natal care in the state has been substantially higher than in the corresponding all-India levels (DLHS II and DLHS III) (Table 3.2). Although part of the relatively high rate of improvement in ante-natal indicators of the state can be attributed to the poor initial levels, the improvement is notable. Even with the improvement however, the state is far off from the National and state level goals and is unlikely to meet the 11th plan target on IMR and MMR.

There has also been a marked improvement in the relative nutritional status of women and children in recent years. In 1998-99, the nutritional status of women and children in the state was significantly worse than the all-India levels, but it has reached close to all-India figures in 2005-06. As per NFHS 2005-06, despite the high poverty level in the state (in comparison to all-India level), nutritional indicators in the state were only marginally worse off than the all-India figures. The relatively better nutritional indicators of the state may arise partly from the fact that Anganwadi centres in the state appear to be more effective in reaching out to people than the country in general. In 2005-06, as per NFHS III, in areas covered by Anganwadi centres, the percentage of children in the age group of 0 to 71 months who received any services from AWCs was more than double the all-India level. There are also indications of better performance of the mid-day meal scheme in the state. As per NSSO 2007, the percentage of households in rural India with at least one member benefiting from mid-day meals is substantially higher than the all-India figures (40.6 per cent in comparison to 22.8 per cent). Improvement in breast feeding is also likely to have contributed partially to the improvement of nutritional indicators in the state. As per the UNICEF coverage survey, initiation of breastfeeding in the first two hours and in the first day has increased significantly in the recent past (GoC 2007-08). The increase is also reflected in data from DLHS III survey carried out in 2007-08. As per DLHS III, the percentage of children (under 3 years), who were breastfed within one hour of birth increased from about 29.5 in 2002-04 to 50.1 in 2007-08.

Table 3.1: Achievement of Chhattisgarh with regard to various goals

Indicator	*Millennium Development Goals (MDGs)*	*National Health Policy (by 2010)*	*Eleventh Plan (by 2012)*	*National Population Policy (by 2010)*	*National Rural Health Mission (NRHM)*	*Medium Term Goals for Chhattisgarh*	*Status in Chhattisgarh*
Infant mortality rate		30 per 1000 live births	28 per 1000 live births (by 2012)	Below 30 per 1000 live births	30 per 1000 live births	35 per 1000 live births (by 2012)	57 per 1000 live births in 2008 (SRS 2009) 71 per 1000 live births in 2005-06 (NFHS III) *Change* Between 2001 and 2008 was 19 (as per SRS) [all-India 13] Between 1998-99 and 2005-06 was 10 (as per NFHS) [all-India: 11]
Maternal mortality Rate	Reduce by three quarters, between 1990 and 2015, the Maternal Mortality Ratio	1 per 1000 live births	1 per 1000 live births (by 2012)	Below 1per 1000 live births	1 per 1000 live births	2 per 1000 live births (by 2012)	3.35 per 1000 live births in 2004-06 (SRS) for combined M.P and Chhattisgarh *Change* 0.44 per 1000 live births between 2001-03 and 2004-06 (SRS) for combined M.P and Chhattisgarh
Crude birth rate				21		<15 by 2016	26.1 in 2008 (SRS 2009) *Change* Between 2001 and 2008 was 0.2 (as per SRS) Between 1998-99 and 2005-06 was 0.6 (as per NFHS)
Total fertility rate			2.1	2.1		2.1	3.1 (SRS 2007) *Change* Between 1998-99 and 2005-06 was 0.17 (as per NFHS)

Table 3.2: 'Output' goals related to maternal and child mortality in Chhattisgarh

Indicator	*Tenth Plan (by 2007)*	*National Population Policy (by 2010)*	*Current Status*
Percentage immunised against all vaccine preventable diseases	100	100	*NFHS 2005-06* 48.7 (Chhattisgarh), 43.5 (all-India) *RCH 2007-08* 59.3 (Chhattisgarh), 54 (all-India) *Change:(Between 2002-04 and 2007-08 as per RCH)* 2.4 (Chhattisgarh), 8.1 (all-India)
% of at least 3 ANC	90	100	*NFHS 2005-06* 54.2 (Chhattisgarh), 52 (all-India) *RCH 2007-08* 51.2 (Chhattisgarh), 51.1 (all-India) *Change: (Between 2002-04 and 2007-08 as per RCH)* 6.8 (Chhattisgarh), 0.7 (all-India)
% received at least two doses of TT	100	100	*RCH 2007-08* 78 (Chhattisgarh), 73.4 (all-India) *Change: (Between 2002-04 and 2007-08 as per RCH)* 3.9 (Chhattisgarh), -6.8 (all-India)
Institutional deliveries (%)	80	80	*NFHS 2005-06* 14.3 (Chhattisgarh), 38.7 (all-India) RCH 2007-08 18.1 (Chhattisgarh), 47 (all-India) *Change: (Between 2002-04 and 2007-08 as per RCH)* Nil (Chhattisgarh), 6.1 (all-India)
Deliveries by trained persons (%)		100	*NFHS 2005-06* 41.6 (Chhattisgarh), 46.6 (all-India) *Change:* 9.3 (Chhattisgarh), 4.3 (all-India)

While the state has done reasonably well in terms of reducing IMR and improving nutritional status, progress in institutional deliveries and fertility rates has been poor. In both these aspects, the achievement of the state has been negligible between the last two rounds of NFHS surveys. While the percentage of institutional deliveries in the state is one of the lowest in the country, the fertility rate is substantially higher than the National target. In 2007-08, only 18.1 per cent of deliveries in the state were conducted in health facilities in comparison to 47 at the all-India level (DLHS III). Although there has been some increase in the percentage of home deliveries attended by trained health personnel, the stagnant percentage of institutional deliveries between the last two rounds of DLHS surveys may impede the improvement of infant and maternal mortality in the state. Similarly, the small change in fertility rate in the state between the last two rounds of NFHS surveys requires a closer look (Table 3.1). Unless specific efforts are made to improve the performance in these areas, achieving the goals of infant and maternal mortality is likely to be difficult for the state.

Morbidity due to a few specific diseases appears to be on the decline. Specifically, there has been a significant decline in the reported number of cases of malaria and the prevalence of leprosy in the state in the recent past (Table 3.3). Despite the decline, the reported number of cases of malaria and the prevalence rate of leprosy in the state are one of the highest in the country. Also, in terms of tuberculosis, the state appears to be close to the targeted cure rate. In 2006, the cure rate of tuberculosis in the state was 84 per cent against a target of 85 per cent. The number of diarrhoea cases in the state was also significant but indicated a declining trend in recent years (Table 3.3). A specific problem in the state is that of sickle cell anaemia, but data on the trend in the incidence of the disease are not available.

Table 3.3: Trend in reported cases of selected diseases in Chhattisgarh

	2002	**2003**	**2004**	**2005**	**2006**	**2007**
Malaria (no. of cases)	235434	194419	194256	187950	190590	147525
Leprosy (prevalence rate)	11.04	7.2	6.01	3.6	1.45	2.34
Diarrhoea (no. of cases)	187176	186736	213216	246925	166697	125463

***Source**:* CBHI (2005) and Department of Health and Family Welfare, Government of Chhattisgarh

The high number of reported cases of diarrhoea can partially be attributed to the conditions of water supply and sanitation in the state. Access to drinking water in the state is worse than the all-India level. In 2007, only about 59 per cent of the habitations in the state were 'fully covered' in terms of access to drinking water, in comparison to 67 per cent at the all-India level. Also, nearly 13 per cent of the habitations in the state were yet to be provided coverage in terms of access to drinking water, in comparison to 11 per cent at the all-India level. Since 2003, the state has primarily focused on providing access to drinking water in 'not covered' habitations (as per the classification of the habitation survey 2003) rather than trying to convert 'partially covered' to 'fully covered' habitations. In fact, the percentage of habitations in the state that are 'fully covered' has remained practically unchanged between 2003 and 2007. Besides, nearly 15 per cent of the habitations in the state are affected by quality problems of water quality. Conditions of sanitation are also worse than the all-India levels. As per Census 2001, only 14.2 per cent of the households in the state had toilets, in comparison to 36.4 per cent at the all-India

level. In rural areas, the percentage of households having toilets was as low as 5 per cent. Given the requirement, the progress in terms of building toilets under the total sanitation campaign has been relatively poor. The number of household toilets built between April 2001 and March 2007 was only about 9 per cent of the total number of households who did not have toilets as per Census 2001. However, there has been a substantial progress under TSC after March 2007 and the number of household toilets built at the end of March 2009 constituted about 32 per cent of the total number of households that did not have toilets as per Census 2001.

2. Factors affecting achievements of the health sector

Lack of adequate health facilities and infrastructure pose a major constraint for improving health indicators in the state. Until 2004-05, since when the state has laid a thrust in improving health facilities and meeting the National norms for sub-centres, primary health centres and community health centres, access to health facilities was remarkably low. This is reflected in the fact that in 2002, distance to a sub-centre and a primary health centre was 10 kms (or more) for more than 81 and 94 per cent of the villages respectively (NSSO 2003). This is true despite the fact that the state had more than 80 per cent of the sub-centres and 70 per cent of the primary health centres required as per the National norms. Additionally, the performance of existing health facilities was adversely affected by large number of vacancies. In 2003-04, nearly two-thirds of the sanctioned posts of doctors and four-fifths of the posts of specialists in the state were vacant. Besides, institutional deliveries were severely constrained by the lack of infrastructure in sub-centres (SCs), primary health centres (PHCs) and community health centres (CHCs). In 2003, a study of 128 selected SCs across all districts of the state found that in nearly 60 per cent of the SCs, institutional deliveries were not possible due to lack of space. Also, in 2003, only 2.8 per cent of the PHCs in the state had the basic required infrastructure, 26.3 per cent had the basic required staff, 14.1 per cent had the basic supplies and 8.8 per cent had basic equipments (Facility Survey IIPS).[5] In general, the poor access to health facilities in rural areas as compared to urban areas of the state is also reflected in the fact that the rural-urban disparity in the rate of hospitalisation in the state is one of the highest in the country (NSSO 2006). The poor state of public health facilities is also mirrored in the fact that, public facilities were utilised for the treatment of less than 15 per cent of the outpatient cases in the rural areas of the state (60th round of NSSO survey). A study on accessibility and cost of health care in selected villages conducted by the State Health Resource Centre also indicated that government facilities were used as the first point of treatment only in about 15 percent of all episodes (inpatients and outpatients) in the rural areas (SHRC 2005). In fact, the study also showed that about a fifth of the total episodes of illness in the rural areas remained untreated.

Two geographical features crucially affect the accessibility of health services in the state: the large forest cover and relatively smaller size of habitations. The state has about 44 per cent of its area under forests and the rest of the area is marked by small hamlets (or habitations). The Habitation Survey 2003 (conducted with respect to rural water supply schemes) indicate that the average size of habitations in the state is less than half of that at the all-India level and is one of the smallest in the country. The distribution of population in numerous hamlets poses a major constraint in providing access to health facilities in the rural areas of the state in a cost-effective manner and renders the criteria of National norms for judging the accessibility to health services in the rural areas of the state inadequate. The situation is further

[5] The corresponding figures at the all-India level were 31.8 per cent 48.2 per cent, 39.9 per cent and 41.3 per cent respectively.

worsened by the inaccessibility of many hamlets due to forests or absence of motorable roads (SHRC 2003). A study of selected sub-centres in the state indicated that more than half of the sub-centres did not have a motorable road (SHRC 2003). The share of forests in the total area is particularly high in the tribal dominated districts of the state. The correlation coefficient between the proportion of ST population and the percentage of forest area in total area across districts was about 0.7. Because of the high forest cover and low density of population, access to health facilities is low in the tribal districts. The correlation coefficient between the percentage of ST population across districts and the gap between the required (as per the National norms) and the actual radial distance served by SCs in the state is positive and as high as 0.86. Besides, many of these tribal districts have large vacancies of medical and para-medical personnel in the existing health facilities and are being considered for being categorised as 'medically underserved areas' of the state. In the tribal areas of the state, 50 per cent of the sanctioned posts of doctors in PHCs and 25 per cent of the sanctioned posts of ANMs in sub-centres are vacant in comparison to 25 per cent and 15 per cent of the sanctioned posts respectively at the state-level (MoHFW 2007).

Improving the quality of health services would also be important for reducing infant and maternal mortality in the state. The poor quality of health care delivered by sub-centres is indicated by the fact that basic tasks like checking blood pressure and testing of urine or measuring the level of haemoglobin is not carried out as part of the ante-natal care checkups (SHRC 2003). ANC care is primarily restricted to registering pregnancy cases and providing them with tetanus toxoid injections and iron folic acids (SHRC 2003). The poor quality of family planning services is also reflected in the fact that the percentage of para-medical staff of SCs and PHCs who are trained for services like IUD insertion is particularly low in the state (FS 2002-04). In one study, discussions with a selected group of 23 ANMs also indicated that only 10 of them had the skills and confidence for conducting IUD insertion (SHRC 2003). Even the bulk of the doctors who are supposed to train MPWs in IUD insertion do not have the required training to do so (SHRC 2003). These are likely to have implications for reducing fertility rate in the state.

It is interesting to note that despite the poor access and a negligible increase in health infrastructure till about 2005-06, the state has been able to improve nutritional status, increase immunisation rates and ante-natal care and reduce IMR significantly. In this context, the role of community health workers (called 'Mitanins'), in bringing about the significant improvements in health indicators has been repeatedly emphasised (Sundararaman 2006, Garg 2006).

On the whole, in recent years, the state has done well in terms of increasing immunisation rates and ante-natal care, reducing IMR and improving nutritional status. However, there are areas like institutional deliveries and fertility rates, where the state has not made sufficient progress. Outputs like institutional deliveries and high untreated morbidity have been affected by the low access to health infrastructure and the poor quality of health care in the existing facilities in the rural areas. The low access has also resulted in a large percentage of people accessing private facilities (largely Rural Medical Practitioners) for treatment of various illnesses (SHRC 2005).

3. Public expenditure on health and related services in Chhattisgarh

1. Health services

Until 2005-06, per capita budgetary expenditure on health and family welfare in Chhattisgarh was one of the lowest in the country. In 2005-06, the state spent about Rs. 146 (in per capita terms) on health and family welfare, which was higher than only the states of Bihar, Orissa and Assam. The low level of per capita expenditure on health and family welfare in the state arose not only from the low per capita income of the state, but also from a low share of this income being spent on health and family welfare. In 2005-06, the state spent a meagre 0.64 per cent of its GSDP on health and family welfare, which was lower than the percentage in most other low income states of the country (excluding Orissa). As a share of the state's total budgetary expenditure, this constituted about 3.7 per cent (in 2005-06), which was also far off from the target of 7 to 8 per cent laid out by the National Health Policy.

Since 2005-06, however, there has been a spurt in budgetary allocation towards health and family welfare in the state. Budgetary allocation towards health and family welfare doubled between 2005-06 and 2008-09. In terms of actual expenditure also, there has been a very significant increase since 2005-06. Per capita expenditure on health and family welfare increased from Rs. 146 in 2005-06 to Rs. 203 in 2007-08; an increase of nearly 40 per cent (Table 3.4). The increased budgetary allocation and expenditure is also reflected in the large increase in infrastructure and manpower in the state. Since 2005-06, 874 new SCs, nearly 200 new PHCs and about 16 new CHCs have been built in the state. Also, there has been a drive towards increasing the number of government buildings for SCs, PHCs and CHCs. In 2006-07, 500 new buildings of sub-centres, 39 buildings for PHCs and 14 buildings for CHCs were sanctioned. Similarly, there has also been a large increase in the number of sanctioned posts and actual number of medical and paramedical staff recruited in the state. With the increase in budgetary allocation, the state is likely to be able to increase its budgetary expenditure by more than 10 per cent every year (as per the requirements of NRHM) Also, with the significant contribution towards Reproductive and Child Health Programme, the state is likely to be able to meet the state's share of 15 per cent contribution towards NRHM (GoC 2007-08).

Table 3.4: Per capita budgetary expenditure on health and family welfare and water supply and sanitation, 2005-06 to 2007-08

(Rs.)

	2005-06	2006-07	2007-08
Health and Family Welfare	146	181	203
Water supply and Sanitation	97	131	185

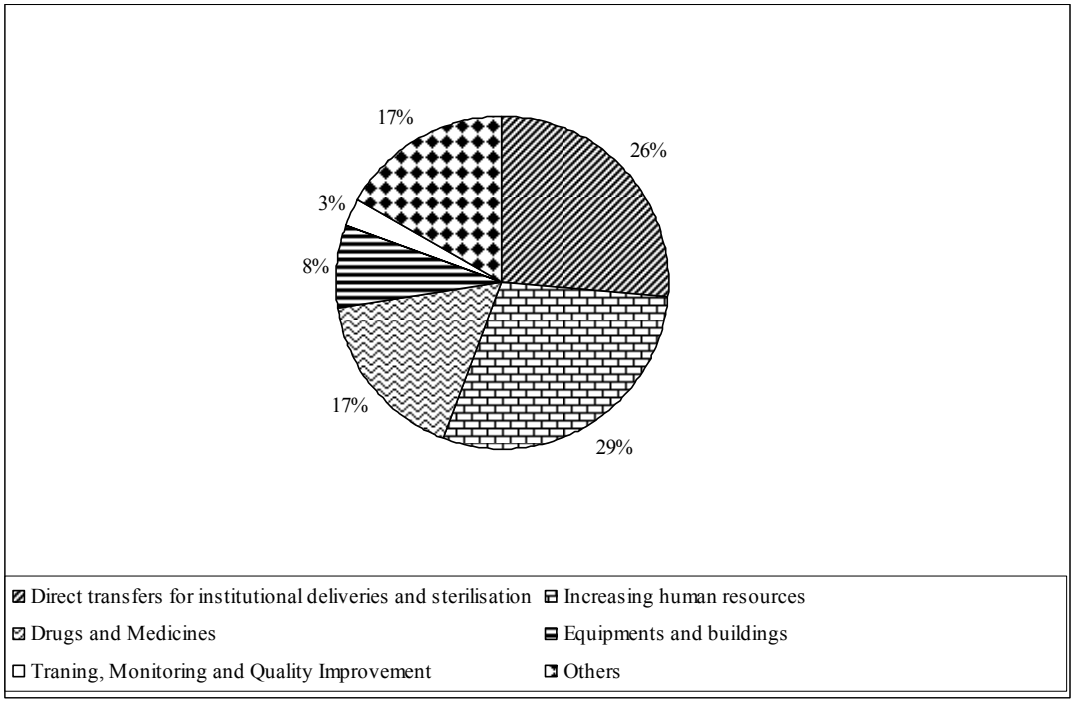
***Source**:* Annual Financial Statement, various years, Government of Chhattisgarh

Apart from the state's increase in budgetary allocation, additional investment in the health sector has also been brought about through the National Rural Health Mission (NRHM). In 2007-08, expenditure under the NRHM constituted about 20 per cent of the total expenditure on health and family welfare in the state. In this context, it is important to note that more than half the funds under NRHM remained unutilised in the state in the year 2006-07 and 2007-08. This calls for a closer look into factors that have led to such low utilisation.

In terms of distribution of expenditure, unlike most other states, Chhattisgarh directs a substantially higher share of its expenditure on health and family welfare

towards rural areas than in urban areas. In 2007-08, the state spent only 20 per cent of its expenditure on health and family welfare in urban areas as compared to 27 per cent in rural areas. As bulk of the primary health facilities are situated in rural areas, this is also reflected in a high share of expenditure being directed towards primary health care services. A classification of the expenditure of the state as per the detailed demand for grants (2004-05) into primary, secondary and tertiary (based on the classification adopted by the National Health Accounts 2001-02), suggest that the ratio of state's spending in primary, secondary and tertiary health care services was 65:25:10. A comparison of this ratio with the suggested ratio of 55:35:10 towards primary, secondary and tertiary as per the National Health Policy indicate that the state spent a relatively higher share towards primary health care and a lower share towards secondary health care services. While there has been some increase in expenditure in the secondary and tertiary sector in the form of medical colleges and district hospitals in the state between 2002-03 and 2007, bulk of the expansion in the recent past has been in the primary health care services due to the focus under the NRHM.

Figure 3.1: Distribution of allocation of funds under the National Rural Health Mission (RCH and Mission Flexible pool), 2008-09



Under the NRHM (primarily the RCH Flexible Pool and the Mission Flexible Pool), bulk of the allocations has been directed towards improving the availability of medical and paramedical personnel and making direct transfers (primarily monetary incentives) for conducting institutional deliveries and expanding family planning services (Figure 3.1). In 2008-09, nearly two-thirds of the allocation for improving the availability of medical and paramedical personnel was towards ANMs and community health workers (Mitanins/ASHAs). If one includes the expenditure towards nursing personnel in PHCs and CHCs, the allocation within human resources increases to 80 per cent. Similarly, of the funds allocated towards expanding family planning services, more than 63 percent was in the form of incentives for institutional deliveries alone. Also, to the extent that 88 per cent of the allocation under drugs and medicines was marked under the RCH flexible pool, it is not clear whether this

includes the expenditure of drugs in health facilities for uses other than Reproductive and Child Health.

In terms of distribution of expenditure under various heads, in 2004-05, about 81 per cent of the expenditure in the state was towards salaries, wages and pensions and only 6 per cent of towards drugs and medicines. The low level of public expenditure on drugs is responsible for the high out of pocket expenditure on drugs in the state. A study of the cost of health care in selected villages of the state indicated that of the total out-of pocket expenditure on health care, about 20 percent was on drugs and medicines alone (SHRC 2005). Also, interestingly, about 13 percent of out-of pocket expenditure on health care was on food and transport, which was indicative of the large distances to health facilities (SHRC 2005).

2. Water supply, sanitation and nutrition

Since 2005-06, as in the case of health, there has been a spurt in budgetary allocation towards water supply and sanitation in the state. Specifically, there has been a substantial increase in allocation towards water supply in the state. Budgetary allocation in water supply and sanitation nearly doubled between 2005-06 and 2008-09 (Table 3.4). Actual expenditure on water supply and sanitation in Chhattisgarh has also increased significantly since 2005-06. Per capita expenditure on water supply and sanitation nearly doubled between the two years 2005-06 and 2007-08 (from Rs. 97 in 2005-06 to Rs. 185 in 2007-08). As a percentage of GSDP, budgetary expenditure on water supply and sanitation in 2007-08 stood at 0.64 (3.1 per cent of the total budgetary expenditure). With the increased allocation and expenditure, the state is likely to be able to provide safe drinking water to every village and habitation in the state (GoC Budget Speech 2008-09).

Expenditure on nutrition in the state is relatively high. Both as a share of budgetary expenditure as well as a percentage of GSDP the state spends one of the highest amounts in the country. In 2007-08, the state spent about Rs. 64 per capita on nutrition. This constituted about 1.1 per cent of its total budgetary expenditure and about 0.22 per cent of the state's GSDP. This is also related to the fact that the ICDS expenditure incurred per child (0 to 6 years age) in the state is high relative to most other states in India. Following 2005-06, there has been a significant increase in the number of Anganwadis in the state and this is likely to drive up further the per capita expenditure on nutrition in the state.

4. Expenditure requirement in health and other related services in the state

Additional expenditure in the health sector is required primarily to increase access to health facilities and improve the quality of health care in the existing facilities. Also, increasing expenditure on primary education and poverty reduction programmes would be important in bringing down fertility rates in the state. Further, improving morbidity levels would call for additional investment in providing access to safe drinking water, sanitation and improving nutritional levels.

On improving access to health facilities, much of the effort of the state has been on meeting the National norms on SCs, PHCs and CHCs. The state has already met the requirement of sub-centres and primary health centres and was 28 short of meeting the requirement of community health centres (based on NRHM Progress Report). Meeting the National norms however, does not provide adequate access to health facilities in Chhattisgarh, as the density of population is less than half of that at the National level (Chhattisgarh: All-India, 154:324). This translates into large distances to health facilities and renders the National norms inadequate for

providing the required access. To counter the large distances to health facilities (even after meeting the National norms) we assume that an ambulance would be required in each PHC and CHC in the state to provide adequate access.

Specifically, our estimate on additional requirement of resources has four components. First, it incorporates the capital cost of constructing the additional CHCs required to meet the National norms and the recurring expenditure to be incurred in them to meet the Indian Public Health Standards (IPHS) based on the unit costs outlined by NRHM (MoHFW 2005). Secondly, it includes the cost of providing an ambulance and an approximate recurring cost of running the ambulances (20 per cent of the capital cost) in each PHC and CHC of the state. Thirdly, we estimate the additional requirements to provide manpower as per the IPHS standards with respect to specific categories. This is based on the estimate of requirement of manpower as per IPHS standards and the existing manpower indicated in the Bulletin on Rural Health Statistics 2007. Fourthly, we add the additional resources required if expenditure on medicine in the state has to be brought at par with a state like Tamil Nadu, where bulk of the patients accessing public health facilities receive free medicines. We assume that with one of the most efficient systems of medicine supply in the country, if Tamil Nadu needs to spend Rs. 15 per capita (in 2003-04), expenditure in Chhattisgarh would need to be increased to at least Rs. 19 per capita in 2007 (Rs. 15 converted to 2007 prices, assuming a 7 per cent inflation rate).

Our estimate suggests that the capital cost of building the additional CHCs required to meet the National norms is about Rs. 55 crore. Additionally, the cost of providing an ambulance to each PHC and CHC is estimated to be around Rs. 150 crore. If this capital investment is spread over a period of 5 years, the requirement of annual capital investment would be about Rs. 41 crore. Further, an additional annual recurring cost of Rs. 81 crore would be required in the new CHCs. Also, to fill up the gaps in manpower in existing SCs, PHCs and CHCs as per IPHS standards and to bring expenditure on drugs at par with the state of Tamil Nadu (in per capita terms), an additional recurring expenditure of Rs. 494 crore and Rs. 24 crore would have to be incurred respectively every year.

For water supply, as per the estimates of the 11^{th} five year plan of the state, an additional amount of Rs. 287 crore is required to cover every habitation with drinking water and also provide better access to piped water supply. For sanitation, using data on the number of rural households without toilets as per Census 2001 and number of toilets built under the total sanitation campaign between 2001 and 2007 and using the unit cost of construction of Rs. 1200 per toilet, we estimate an additional requirement of about Rs. 344 crore. If this capital investment is spread over a period of five years, an annual investment of about Rs. 126 crore would have to be incurred every year.

For improving nutritional status, we primarily focus on the resources required for providing nutritional supplements to all malnourished children in the age group of 0-6 and to pregnant and lactating mothers who are anaemic. Using the financial norms for providing nutritional supplements under ICDS, estimates suggest that the state needs to spend about Rs. 255 crore annually. In 2004-05, the state spent about Rs. 71 crore under ICDS. This indicates that an additional Rs. 184 crore is required to be spent annually to meet the basic nutritional needs.

Table 3.5: Additional requirement of resources in health and related sectors in Chhattisgarh, terminal year (Rs. crore)

	Capital cost	Recurring cost
New Health Facilities	55/5=11	81
Providing ambulance services in PHCs and CHCs	150/5=30	30
Filling up vacancies in SCs, PHCs and CHCs		494
Medicines		24
Water supply	287/5=57	29
Sanitation	344/5=69	
Nutritional supplements		184
Total	167	842

Together, a minimum additional expenditure of Rs. 1009 crore need to be incurred each year towards health, family welfare, water supply, sanitation and nutrition. This constituted about 1.5 per cent of the state's GSDP in 2007-08.

5. Distribution of the benefits of public expenditure

The performance of public expenditure can be analysed in terms of the distribution of the benefits of public spending across income classes. In this context, an approach that has been widely used for analysis is that of 'Benefit Incidence Analysis' (BIA). BIA combines information on the unit costs of providing public services with those on the use of such services to estimate the benefits derived by different groups of individuals or households. This section uses BIA to analyse the distribution of public spending on health facilities in Chhattisgarh across expenditure quartiles in rural and urban areas.

Ideally, unit costs of each public service provided in health facilities and their utilisation by households across income quartiles need to be measured for the analysis. However, non-availability of data on utilisation of each public service provided in health facilities combined with the inability to decompose information on public spending on health facilities for individual services restricts the analysis to a relatively aggregate level. Specifically, the analysis here focuses on six services for which information on utilisation was available from the 60th round of NSSO data for the year 2004: inpatient services (excluding childbirth), outpatient services, inpatient services related to childbirth, antenatal care services, postnatal care services and immunisation services. A recent benefit incidence analysis of health expenditure in India (NCAER 2002) argued on the basis of facility-level studies that in public hospitals, public expense on a single inpatient was about six times the expenditure on an outpatient. The corresponding expenses in PHCs and dispensaries were about half of those in public hospitals. Also, expenditure on ante-natal care, post-natal care and immunisations in public hospitals was argued to be half of that in PHCs and dispensaries. In our analysis, we have borrowed these norms from the NCAER study. However, as the 60th round of NSSO data does not provide information separately for PHCs and public hospitals, we assume that expenses for inpatient cases are in general, six times higher that the expense for outpatient visits; that for childbirth, about half the expense of that of an inpatient visit for other cases. Expenses for ante-natal care, post-natal care and immunisations are taken to be about one-fourth of that of an outpatient visit. As the 60th round of NSSO data does not provide information separately on immunisations from public and private sources,

we assume that immunisations from public sources across quartiles are in the same proportion as that of ante-natal care from public sources. The assumption is based on the fact that both ante-natal care and immunisations are part of maternal and child care activities provided by similar public sources. The state's budgetary (revenue) expenditure on health culled out from the detailed demand for grants in budget documents is used, along with these norms taken from the NCAER study, to estimate the unit cost of each public service. Care is taken to include only expenditure that is directly incurred in health facilities. Again, following the NCAER study, we assume that half of the expenditure on disease control, and medical education and training, whose benefits accrue partly to people outside health facilities also, is incurred through health facilities. Also, expenditure on direction and administration is excluded as in the NCAER study. Budgetary receipts on payments from patients are then deducted from the total state expenditure on health facilities to arrive the net public spending.

A conceptual problem in the methodology used arises from the fact that, apart from public services in health facilities for which information on utilisation is available, there are services like family planning activities, which are provided in health facilities, yet no information on utilisation of these services in health facilities across income quartiles is available. While this compels one to exclude these services from the utilisation aspect in the analysis, the same cannot be excluded from public spending. To the extent that family planning services from public sources are used relatively more by the poorer sections of the population, the benefits of public spending on health facilities accruing to the poorer sections of the population are underestimated in the analysis.

The analysis suggests that on the whole, the benefits of public spending accrue more to the richer half of the population in the urban areas and the poorer half in the rural areas. In the rural areas, the relatively higher benefits of public spending accruing to the poor are primarily driven by outpatient services. For inpatient services (curative purposes) however, the benefits of public spending accrue more to the richer sections even in the rural areas. A possible reason for the relatively lower benefits to the poorer sections for inpatients (hospitalisations) could be the large distances to health facilities, which translates into a higher cost, as also higher supplementary costs. The high cost of accessing public facilities for hospitalisation is also possibly reflected in the fact that the rate of hospitalisation in the rural areas is one of the lowest in the country. For preventive services like ante-natal care and immunisations, the benefits of public spending are primarily derived by the poorer sections in both the rural and the urban areas. It is however, less pro-poor in the rural areas than in the urban areas.

Table 3.6: Distribution of Benefits of Public Spending for Healthcare (by MPCE quartiles)

Quartiles	Inpatients	Out-patients	Ante-natal care	Immunisations	Total
		Rural			
lowest 25	22	39	19	25	35
25 to 50	11	20	31	29	19
50 to 75	22	19	22	23	20
highest 25	45	22	28	23	26
		Urban			
lowest 25	22	23	31	46	24
25 to 50	16	22	57	35	21
50 to 75	33	25	11	14	26
highest 25	29	31	2	4	29

6. Conclusions

Chhattisgarh's achievements in the health sector are lower than the all-India level. In the recent past, while the state has made substantial progress in terms of immunisation rates, ante-natal care, nutrition level and reduction of IMR, progress in institutional deliveries and fertility rates have been negligible. Also, achievements in terms of providing access to curative services has been poor with high rates of untreated morbidity and low rates of hospitalisation in the rural areas of the state. A major factor contributing to this has been the low access to health infrastructure. Although there has been a stress on increasing the number of health facilities in the form of SCs, PHCs and CHCs since 2005-06, the primary focus has been on meeting the National norms. National norms are however inadequate in Chhattisgarh due to the low density of population, which translates into higher distances to health facilities than that required as per the National norms. Besides, high forest cover and distribution of population in small hamlets and habitations in the state reduce the access to health facilities and increases the cost of provision.

While the state has nearly doubled its budgetary allocation on health and family welfare since 2005-06, it is still far from the National target of spending 7 to 8 per cent of its budget on health and family welfare. In terms of distribution of expenditure, unlike most other states, the state spends a higher amount in rural areas than in urban areas and needs to increase its share of expenditure towards secondary and tertiary health care services. Also, expenditure on drugs and medicines in the state is low. With expenditure on drugs and medicines forming a major component of out-of-pocket expenditure for health care, increasing expenditure on medicines could be crucial for reducing the regressive nature of financing health care in the state. Also, with additional funding from the National Rural Health Mission mostly directed towards primary health care services, the secondary and tertiary health care services call for attention of the state. Notably, to fill up the large vacancies in the primary health care services, it is important to increase the supply of doctors, nurses and paramedical staff through higher expenditure in medical, nursing and other colleges, which are in the tertiary sector.

In recent times, the state has focused largely on increasing expenditure on providing incentives for institutional deliveries and appointment of paramedical staff like ANMs and ASHAs/Mitanins under the National Rural Health Mission. Appointment of ANMs and ASHAs/Mitanins is likely to have an important bearing on improvement in the coverage of preventive services like immunisation and ante-natal care. Increasing institutional deliveries would however require arrangements for transferring patients to health facilities and in this context increasing expenditure towards ambulance services could be useful. The helpline established by the state under the Janani Suraksha Yojana is an important step in this aspect. Also, the state's attempt at identifying the 'medically under-served areas' and providing incentives to doctors to serve in these areas is likely to improve the availability of doctors in remote areas. Besides, the 'Swasthya Panchayat' introduced to collect information on every village of the state is likely to have important bearing on better policy interventions. For reducing fertility rates however, apart from increasing expenditure towards primary education and poverty reduction programmes, providing adequate training to medical and paramedical staff for family planning services could be crucial. Besides, filling up the gaps in basic instruments (like haemoglobinoneter) in sub-centres could substantially improve the quality of primary health care services in the state.

IV. ELEMENTARY EDUCATION IN CHHATTISGARH

1. Introduction

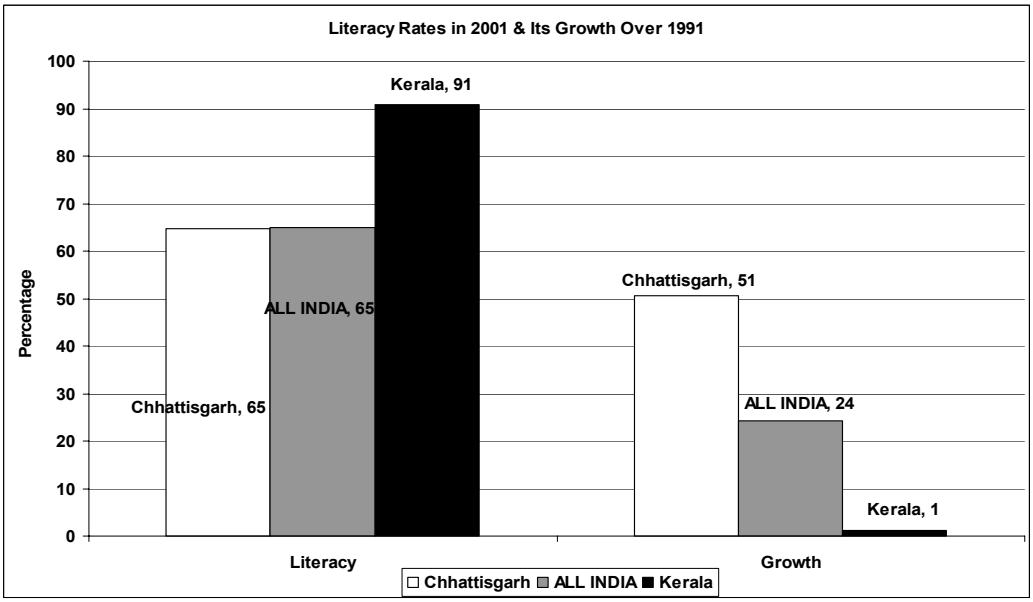
A minimum level of education is a *sine qua non* for successful operation of democracy, an enlightened and law-abiding society, and an optimally productive human resource base; besides, it provides to the poor one of the ways of climbing out of poverty. Although education in the true sense of the term is much wider than what one learns in the school (or other educational institutions) alone, in this chapter we discuss elementary school education provided by the state only. This focus is justified by several reasons including (a) the statutory obligation on the government to provide free elementary education to all children in the age group of 6-14, (b) the hierarchical structure of education making it necessary to universalise elementary education before tackling secondary and higher education and (c) the primary responsibility of providing this service being borne by the state governments.

As per the Millennium Development Goals (MDGs), the following targets in education are proposed to be achieved by 2015:

- All children to complete a full course of five years of primary school.
- Eliminate gender disparity in primary and secondary education by 2005, and in all education by 2015.

In India, the Planning Commission set stiffer targets to be achieved by the end of the 10th and 11th Five Year Plans, but the key ones have already been missed. However, the ambitious targets have at least achieved the objective of imparting urgency into the process of making basic education available to all. A National level legislation on Right to Education is also on the anvil.

Figure 4.1: Relative Literacy Level in Chhattisgarh



***Source*:** Office of the Registrar General, India and *Economic Survey 2006-07*.

A widely used indicator of the spread of education is literacy. In Chhattisgarh, the literacy rate (65 percent) is equal to the all India average. If we consider the growth of literacy rate in 2001 (Census) as compared to 1991, the state has registered 51 percent growth rate in literacy as compared to the all India growth of 24 percent only (Figure 4.1). This is of course partly because of the increasing difficulty in raising literacy as one makes progress towards full literacy. This is illustrated in the figure with the case of Kerala, which could not achieve much increase in literacy from its already high level.

The literacy rates among males and females in Chhattisgarh in 2001 were 77.4 and 51.9 percent respectively, exhibiting a very large gender gap. There was also wide disparity between rural and urban areas, as well as between SC and STs on the one hand and other social groups in the state on the other, with respect to literacy (Table 4.1). Literacy rate among the rural ST females was the lowest (38 percent) among the subgroups, and despite a higher rate among SC females (47 percent), rural women seem to require special attention as a whole. But it should be noted that the literacy rate among rural women in Chhattisgarh was marginally better than the comparable all India average. Between SCs and STs, SCs have a higher literacy rate in general, but in urban areas the story is just the opposite. The small part of the ST population of the state living in urban areas (8.4 percent) appears to fare better compared to the urban SC and, of course, their rural counterparts. This is possibly because mostly literate STs migrate into urban areas.

Table 4.1: Literacy Rates by Residence, Caste and Gender in 2001

Category	Total	Male	Female	% Popn
Scheduled Castes				
Total	64.0	78.7	49.2	11.6
Rural	62.5	77.8	47.3	11.4
Urban	69.3	81.8	56.3	12.4
Scheduled Tribes				
Total	52.1	65.0	39.3	31.8
Rural	50.9	64.0	38.2	37.6
Urban	71.7	82.9	59.8	8.4

Source: Based on 2001 Census.

A look at the district level literacy rates of Chhattisgarh reveals wide inter-district variation in literacy (Table 4.2). In 2001, Rajnandgaon registered the highest literacy rate of 77 percent with 87.2 percent male literacy and 67.6 percent female literacy, whereas Dantewada had the lowest rate of overall literacy (30 percent), with only 40 percent of male and 20.7 percent female literacy.[6] There are three other districts well below the state average – Bastar, Surguja and Kawardha. All four of the low literacy districts have large tribal population, and the low literacy rates of the districts mirror the low rural ST literacy. All other districts are either above or marginally below the state average. Clearly, an intensive effort to increase literacy in these four districts would result in a substantial rise in the state average. There is a

[6] This could be both cause and effect of the particularly disturbed conditions in the district; past low levels may indicate lack of development that contributed to the present problem of unrest, and the latter probably contributed to the continuation of low literacy in the district.

close correlation between 1991 literacy rates of the districts with that during 2001, implying little change in the relative position of districts with respect to literacy.

Table 4.2: Literacy Rate of Chhattisgarh and Its Districts during 1991 & 2001

(percentage)

Literacy Rate (%)	1991			2001		
	Persons	Males	Females	Persons	Males	Females
Bastar	23.06	32.41	13.7	43.9	56.3	31.6
Bilaspur	45.46	62.43	27.99	63.5	78.4	48.2
Dantewada	16.46	22.87	10.09	30.2	39.8	20.7
Dhamtari	52.84	69.92	36.02	74.9	86.5	63.4
Durg	58.70	74.06	42.78	75.6	86.4	64.6
Janjgir-Champa	47.36	67.41	27.56	65.9	81.8	50.1
Jashpur	38.33	51.02	25.67	63.8	75.2	52.4
Kanker	37.71	51.37	24.13	72.9	82.7	63.3
Kawardha	29.78	45.42	14.16	55.2	71	39.5
Korba	45.30	61.52	28.15	61.7	75.9	47.0
Koriya	38.79	51.78	24.53	63.1	75.7	49.7
Mahasamund	42.85	60.22	25.85	67.0	81.1	53.3
Raigarh	42.96	59.05	26.93	70.2	82.7	57.6
Raipur	48.65	65.47	31.56	68.5	82	54.8
Rajnandgaon	48.77	66.01	31.91	77.2	87.2	67.6
Surguja	27.34	39.01	15.21	54.8	67.6	41.6
Chhattisgarh	42.91	58.07	27.52	64.7	77.4	51.9

Source: Census of India, 2001.

2. Enrolment

The proportion of children going to school in the total number between 6 and 14 years of age in Chhattisgarh is 84.7 percent, which is only marginally below the all India average of 85.3 percent. The comparable figure for SC, ST and OBC children is lower than the state average, but SC and ST children of 6-14 years have a higher enrolment ratio in Chhattisgarh (83.6 percent) as compared to the all India average (79.7 percent). This is a significant achievement of the state given the presence of a large tribal population with low spread of education among them.

There is large variation in enrolment indicators among districts within Chhattisgarh (Table 4.3). For example, the net enrolment ratio of the district of Dantewada is only 16.6 at upper primary level while in Janjgir Champa it is 75. However, at primary level, Chhattisgarh is close to achieving 100 percent NER; only a final push in a few districts like Durg, Dantewada, Raigarh, Jashpur and Dhamtari is required to cover the remaining gaps. Of course, the case of Dantewada is a special case not only because of the disturbed conditions but also for the reason that the difference between the NER at the primary and the upper primary levels is unusually large. The gender parity index (GPI) does not vary so much among the districts (from a high of 0.99 in Korba to a low of 0.87 in Dantewada), implying no significant or widespread discrimination in enrolment. But the pattern that emerges from the figures shows that there is probably a positive relationship between the overall literacy rate, NER and the GPI. However, at the two extremes, Dantewada has the lowest literacy rate of 30 percent and the lowest GPI with female literacy of 20.8 percent, while Janjgir Champa has registered good NER in both primary and upper primary level but with a relatively poor GPI.

Table 4.3: Enrolment Indicators in Chhattisgarh, 2007-08

District	GPI	Net Enrolment Ratio in	
		Primary	Upper Primary
Bastar	0.96	100.0	34.6
Bilaspur	0.93	100.0	54.1
Dantewada	0.87	85.8	16.6
Dhamtari	0.98	93.1	58.4
Durg	0.98	82.7	53.4
Janjgir Champa	0.92	100.0	75.0
Jashpur	0.98	91.7	48.7
Kanker	0.97	98.3	47.8
Kawardha	0.96	100.0	54.3
Korba	0.99	99.7	53.1
Koriya	0.96	99.0	56.2
Mahasamund	0.98	100.0	58.9
Raigarh	0.98	86.4	50.6
Raipur	0.95	100.0	56.4
Rajnandgaon	0.98	100.0	61.6
Surguja	0.95	100.0	56.7
CHHATTISGARH	0.96	96.0	52.3
Maximum	0.99	100.0	75.0
Minimum	0.87	82.7	16.6

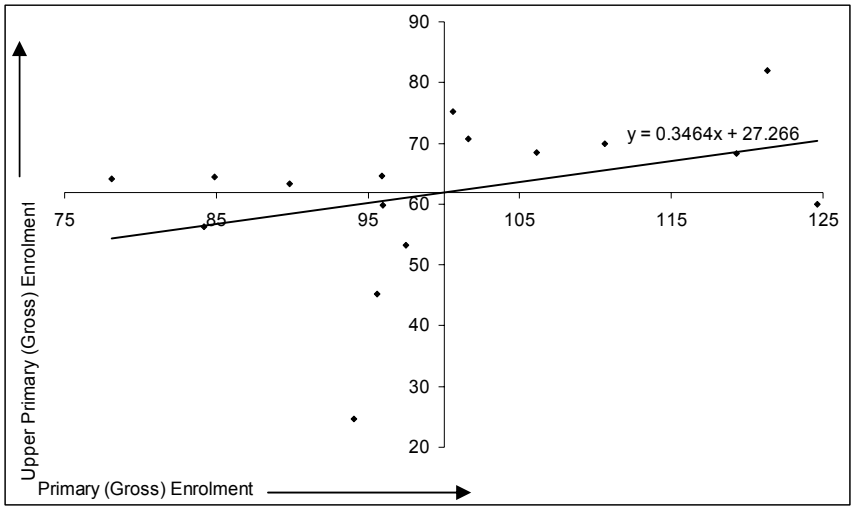
***Source*:** District Report Cards 2007-08, DISE

***Note*:** GPI: Gender Parity Index

A scatter diagram (Figure 4.2) to find the relation between enrolment in primary schools and the upper primary schools in different districts during 2004-05[7] does not reveal a very significant correlation between these two (indicating a high dropout rate before or at the class five level), though it is positive. When the positive trend line is plotted along with the two axes set at the state averages, it is possible to identify the districts that are performing above average or below. As expected, most of the districts lie either in the first or in the third quadrants. Jashpur, Durg, Raigarh and Koriya are in the second quadrant showing higher than average upper primary enrolment but lower than average performance in primary enrolment. On the other hand, Kawardha district has a high level of primary enrolment but a below-average enrolment ratio in the upper primary level. Districts like Mahasamund, Dantewada, Bastar, Surguja and Korba have shown lower than average performance *vis-à-vis* both primary and upper primary enrolment ratios. Of course, the picture is changing fast, and primary enrolment is increasing every year. Still, it would be useful to look closely at the five districts that exhibit low enrolment in both primary and upper primary levels to design corrective policy. The case of Kawardha is unique in that the implied dropout rate is the highest, although primary enrolment is quite high. Again, it needs a closer look to find the cause(s), including possible over-reporting of primary level enrolment.

[7] More recent data do not have much of variation in enrolment at the primary level, and hence less suitable for testing the correlation examined here.

Figure 4.2: Gross Enrolment in Primary and Upper Primary Levels



***Source*:** Based on data from DISE (District Information System for Education)

Table 4.4: Progress Indicators of Elementary School Students, 2007

Districts	Primary				Upper Primary		
	NER	Cohort Drop-out	Completion Rate	Transition Rate	NER	Cohort Drop-out	Completion Rate
Bastar	96.35	7.18	90.24	80.44	86.03	10.45	76.75
Bilaspur	97.92	9.77	84.15	92.54	97.26	11.84	65.19
Dantewada	94.86	66.00	39.32	93.84	51.11	11.00	46.13
Dhamtari	99.71	13.21	81.92	91.42	99.13	10.43	67.26
Durg	99.17	8.63	75.46	97.59	86.08	12.60	66.43
Janjgir-Champa	97.67	5.96	87.72	88.69	85.81	14.76	79.95
Jashpur	98.44	14.29	89.11	94.54	97.83	8.41	71.11
Kanker	97.54	9.84	83.21	89.08	88.26	11.89	81.07
Kawardha	94.45	23.82	63.13	84.36	91.19	26.82	58.93
Korba	96.10	13.00	83.51	95.90	96.00	10.00	83.59
Koriya	99.78	5.90	92.25	95.57	94.40	12.83	88.30
Mahasamund	99.44	19.80	81.14	97.88	98.06	20.02	75.13
Raigarh	99.48	6.25	91.30	97.38	98.73	8.13	88.34
Raipur	98.28	14.24	76.41	95.01	97.83	12.34	77.06
Rajnandgaon	99.04	12.97	85.49	94.32	97.57	15.87	78.16
Surguja	95.77	12.84	83.03	89.61	87.40	18.27	76.84
Chhattisgarh	97.79	15.23	78.82	93.23	90.79	13.48	74.25

Source: MIS, SSA Chhattisgarh;

Note: Normally, drop-out rate and completion rate together should be ≤ 100, since all enrolled pupils either drop out or complete or repeat. In some of the districts, the sum of the two rates is above 100, which is probably because of some reporting or other statistical error. The errors do not seem to be serious, though.

Some other indicators related to enrolment and progress of children in schools are provided in Table 4.4. Net enrolment is well above 90 percent in all the districts, which probably indicates no major difficulty with respect to access. But the primary level drop-out rates do indicate problems, even if we keep aside the case of Dantewada as a special one. Kawardha, for example, has a very high drop-out rate at the primary level, as is the case in Mahasamund. As expected, there is an inverse

relationship between drop-out rate and completion rate, which implies that repetition rate is not large, nor does it vary much or systematically across districts. However, Durg and Raipur districts show the lowest completion rates; it is probably ascribable to the two larger cities of the state in these two districts, a substantial number of slum children and poor quality of schooling and education for them.

The transition rate from primary to the upper primary level is 93 percent on an average for the state, which is exceptionally high among less developed states of India. There is no seriously laggard district in this respect, but the rates in Bastar and Kawardha could do with improvement. The NER at the upper primary level is also above 90 percent for the state as a whole, as a result of the high transition rate. The dropout rates at the upper primary level are, if anything, smaller than at the primary level, but the completion rates are also smaller than at the primary level. This implies a significant repetition rate; the districts that may require special attention in this respect are Bilaspur, Dhamtari, Durg and Jashpur.

3. Infrastructure

The elementary schools in Chhattisgarh are overwhelmingly in the government domain, particularly if we include government-aided schools also, but private schools are not negligible in number (Table 4.5). There are still a number of schools that are unrecognised, including a few secondary schools. Apart from the statutory obligation, the *de facto* position also imposes the primary responsibility of providing elementary schooling on the government.

Table 4.5: Number of Schools by Management, 2007

Type of School	Govt. including local bodies	Govt. aided	Unaided private		Total
			Recognised	Unrecognised	
Primary	30441	287	2833	204	33765
Upper Primary	9245	113	1474	68	10948
Secondary with Upper Primary	764	30	573	18	1391

Source: MIS, SSA Chhattisgarh

Access to schools is fairly comprehensive as is evident from Table 4.6. The table shows, by districts, the total number of habitations, those eligible to have a primary school as per norms, and those (by population size) that actually have one within the prescribed distance of one kilometre. More than 90 percent of the eligible habitations had a school in all districts, with the state average being 96 percent. Two districts – Raigarh and Durg – had 100 percent of the eligible habitations covered, the districts with lowest coverage being Bastar and Dantewada. More than 90 percent of schools in the state (94 percent of primary schools and 93 percent of only upper primary schools) are located in rural areas, so access should not be a major problem even in rural areas. Whatever pockets of inadequate access that remain are likely to be covered in a couple of years in the normal course. In fact, percentage of schools without enrolment during 2005-06 was found to be 6.2, which is much higher than the all India average (2.92), implying some supply-demand mismatch.

But reasonably complete access to schools by itself does not imply adequate infrastructure. The schools have to be adequately provided with buildings, classrooms, drinking water, toilets, boundary walls and electricity. Of the currently

running schools, about 46 percent are established during or after 1994 and 22.5 percent schools are established in/after 2002-03. But, more than 30 percent of these newly built schools established since 2002-03 did not have school buildings even by 2007-08. More than 20 percent of the schools in Chhattisgarh did not have any pucca or even partially pucca building during 2007-08. More than 13.5 percent of the schools had no classrooms and 43 percent had at most two classrooms. Average enrolment per school was 89 in Chhattisgarh as compared to the all India average of 148 in 2007-08. This would imply less than optimal size of classes and consequent additional expenditure on teachers if pupil-teacher ratio is also too low.

Table 4.6: Access to Formal Primary Schools, 2007

Name of district	Total No. of habitations	Eligible habita-tions as per norms	Habitations with formal primary schools					
			Popn. >500	Popn. 500-250	Popn. 250-200	Popn. 200-100	Popn. <100	Total
Bastar	3591	2987	254	562	876	916	139	2747
Bilaspur	2922	2904	1343	649	289	305	307	2893
Dantewada	5206	4900	628	1161	1036	963	685	4473
Dhamtari	882	881	289	184	90	165	152	880
Durg	2310	2308	1728	388	100	68	24	2308
Janjgir-Champa	1545	1465	862	289	126	57	44	1378
Jashpur	2826	2821	349	843	387	600	500	2738
Kanker	1947	1731	523	438	351	260	47	1619
Kawardha	1070	1029	433	268	103	150	55	1009
Korba	1997	1970	606	485	311	291	222	1915
Koriya	1811	1807	301	459	261	412	325	1758
Mahasamund	1377	1370	857	289	95	54	59	1354
Raigarh	2562	2514	995	721	267	318	213	2514
Raipur	2967	2838	1824	385	272	153	80	2714
Rajnandgaon	1964	1899	1025	488	175	169	18	1875
Surguja	5775	5557	1301	1636	823	1037	486	5283
Total	**40752**	**38981**	**13318**	**9245**	**5562**	**5918**	**3356**	**37458**

Source: MIS, SSA Chhattisgarh

More than 13.5 percent of the government schools did not have any drinking water facility in the school till 2007-08. Toilet facilities were entirely inadequate, with only 32 percent of the primary schools in Chhattisgarh having at least common toilet facility, (India: 58.6 percent). Separate girls' toilet was provided in less than 14.5 percent of the primary schools and less than 20 percent of all schools, compared to respective all India averages of 29 percent & 37.5 percent. This is a factor known to inhibit enrolment of girls (particularly post-primary stage) in schools. Electricity connection was available in only 12 percent of the primary and 19.6 percent of all schools in 2007-08; the comparable all-India figures were considerably larger. Lack of electricity connection obviously has a negative impact on computer education or even use of computers. Clearly, there is a long way to go before the school infrastructure situation can be considered satisfactory.

The most important part of the infrastructure for education, if they can be called that, is the teachers. The state as a whole has a pupil teacher ratio (PTR) of 34 at the primary level and 28 for all schools (2007-08). This is below the norm of 40 prescribed for judging sufficiency of the number of teachers. The PTR would be smaller if all the vacant posts of teachers were filled up. However, as in everything else, there is substantial variation across districts in PTR also, with Durg and Dhamtari districts having relatively high PTRs in both primary and upper primary levels; at the primary level, Bilaspur district has the highest PTR. There are many single teacher schools in the state; about 18.2 percent of the primary schools are single teacher schools and such schools were about 14.7 percent of the total during 2007-08. The percentage of female teachers in the state (33) is lower than the national average (40), possibly indicating a need for a drive to appoint them in view of the oft-cited advantages of having female teachers for primary students. In terms of qualification, half of the teachers in primary schools in the State and 63.5 percent of all teachers are at least graduates.

Since Chhattisgarh is a state with large tribal population, it is relevant to note that 33.7 percent of male and 29.9 percent of female primary school teachers and more than 28.7 percent of all teachers come from scheduled tribes. As tribal children may be more comfortable in the initial years of schooling with their own languages and the tribal teachers have better potential to actually use the tribal languages, the high percentage of tribal teachers at the primary level may be useful. A substantial part of the total number of teachers consists of para-teachers or *Shiksha Karmi* in the state. 26 percent of male primary school teachers and 35 percent of female primary school teachers were para-teachers during 2005-06. But the para-teachers are not in general significantly less qualified than regular teachers; more than 45 percent of para-teachers teaching in primary schools are at least graduates, and more than 90 percent of the para-teachers have passed at least the higher secondary level in 2007-08. The para-teachers are appointed and their contracts get renewed by local bodies, providing considerable local control over them. But the inherent inequity of having regular teachers and para-teachers working at the same time, doing more or less the same job with considerable difference in wages and other benefits, may create administrative problems in future. A possible way of heading off such potential problems would be to provide a channel through which at least a part of the total number of para-teachers are regularised every once in a while. This, it is understood, is being done in phases.

4. Quality of Education

An important aspect of education, not necessarily assured by the most complete supply of educational infrastructure, is the quality of education imparted. This is the outcome of several factors, each playing its role, but none ensuring the outcome by itself.[8] As such, among the different aspects of education, this is the most difficult to ensure and hence qualifies to be considered an independent indicator. There is not much information with empirical content on the quality of education; the Annual Survey of Education Report (ASER) of Pratham is the foremost among those available. As per the ASER 2007, the quality of education in Chhattisgarh in the early years appeared to be at least as good as the average for India, except with respect to English. But the quality of education seemed to be falling off relative to the Indian averages for the higher level classes.

[8] Of the various elements that determine quality of education, it is perhaps the teacher characteristics that are the most important. See, Chapman and Adams (2002) for details.

As per the latest ASER 2008, among the children in Std. 1-2 of the state, 94 percent can read letters, words or more in their own language and also can recognize numbers, as compared to the all India averages of slightly higher than 75 percent. Among the children in Std. 3-5, those who can read Level 1 text or more in their own language was 85 percent and 80 percent could subtract or do more difficult arithmetic; the comparable national averages are 66.5 and 55 percent respectively. ASER 2008 report acknowledges the fact that "Reading levels in Chhattisgarh have improved dramatically across the board. In Chhattisgarh, the improvement in arithmetic is dramatic, indicative of a focused intervention." Clearly the fall-off in the relative quality of education at the higher classes noted above does not hold true any more.

Table 4.7 provides the values of the indicators of quality of education by districts in the state (except Dantewada). Among the districts, the performance of Raigarh appears to be the worst in the initial years. However, for std. 3-5, the performance of Raigarh as also Mahasamund is found to be the poorest. The quality indicators of Koriya appear to be consistently high across indicators; the only other district with such consistency is Bilaspur. In general, the quality of education in the state appears to be good across the state; if the quality can be maintained for a few years, it would be certainly praiseworthy.

Table 4.7: Quality of Education in Chhattisgarh

(percentages)

Districts	Std. 1-2 Learning Level		Std. 3-5 Learning Level			
	who can read letters, words or more	who can recognize numbers or more	who can read std 1 text or more	who can do subtraction or more	who can tell time of both clocks	who can do currency tasks
Bastar	97.1	95.8	93.5	78.9	42.1	82.3
Bilaspur	94.1	94.1	83.8	84.1	90.3	85.6
Dhamtari	96.8	96.8	91.0	88.5	59.0	79.2
Durg	99.1	97.4	90.7	86.6	64.7	83.7
Janjgir Champa	94.7	94.3	83.5	77.2	55.8	73.9
Jashpur	94.7	97.4	84.7	75.8	33.0	73.3
Kanker	88.2	91.6	82.5	85.5	70.0	75.1
Kawardha	96.5	97.3	82.9	76.8	67.8	77.7
Korba	93.9	95.1	92.0	92.3	43.1	84.6
Koriya	97.1	97.4	91.4	90.6	81.9	88.2
Mahasamund	92.6	93.6	77.7	70.1	46.6	61.4
Raigarh	88.1	86.4	79.1	69.2	54.0	72.7
Raipur	91.3	93.6	82.4	70.7	66.8	88.0
Rajnandgaon	92.1	92.6	89.5	86.7	54.7	80.7
Surguja	92.2	94.0	81.1	81.4	59.4	79.4
Total	93.8	94.4	85.1	79.9	60.9	80.3

Source: ASER 2008, Pratham

5. Dropouts and out-of-school children

The estimated dropout rate and estimate of out-of-school children in the state varies from one source to another: while the household survey carried out in 2005-06

puts the dropout rate at about 10 percent and about 5.3 percent out-of-school children (the latter would be sum of dropouts and never enrolled children), the Pratham surveys of successive years indicate smaller and fast declining percentage of out-of-school children in rural Chhattisgarh. In terms of absolute number, however, even going by the household survey, the estimated number of out-of-school children should be less than 1.5 lakh, which can be expected to be reduced substantially sooner rather than later with adequate attention being paid to this aspect under SSA. This is confirmed by the information on reasons for not attending school provided in Table 4.8.

Table 4.8: Estimated Out-of-School Children with Reasons

Name of District	No. of out-of-school children as per household survey	No. of out-of-school children with reason								
		Lack of interest	Lack of Access	House-hold work	Migration	Earning compul-sions	Failure	Socio cultural reason	Non flexibility in school timing and system of school	Other reason
Bastar	33303	5721	12758	960	150	943	1220	10756	94	701
Bilaspur	10476	385	94	3001	1664	1583	387	523	282	2557
Dantewada	42875	3863	5141	15938	3126	3449	2923	4486	2225	1725
Dhamtari	687	0	0	406	18	71	85	28	48	31
Durg	4731	125	431	1383	532	1523	366	255	0	116
Janjgir-Champa	5184	464	617	1421	1183	960	242	130	62	105
Jashpur	4247	138	792	492	96	593	426	243	91	1376
Kanker	3244	1126	1542	178	0	162	130	78	0	28
Kawardha	9688	1356	484	872	1163	1259	1453	678	581	1841
Korba	8584	842	2925	792	314	870	841	866	497	637
Koriya	832	105	177	250	8	12	66	67	3	144
Mahasamund	1858	28	143	336	453	259	415	66	46	112
Raigarh	1710	158	32	559	186	183	63	63	45	421
Raipur	13687	1916	684	1232	1642	1779	2053	958	821	2601
Rajnandgaon	8222	88	195	1271	2062	1977	576	886	479	691
Surguja	20076	1598	6117	5418	296	2603	1177	1290	816	761
Total	**169404**	**17913**	**32133**	**34509**	**12893**	**18227**	**12423**	**21373**	**6091**	**13846**

Source: MIS, SSA Chhattisgarh

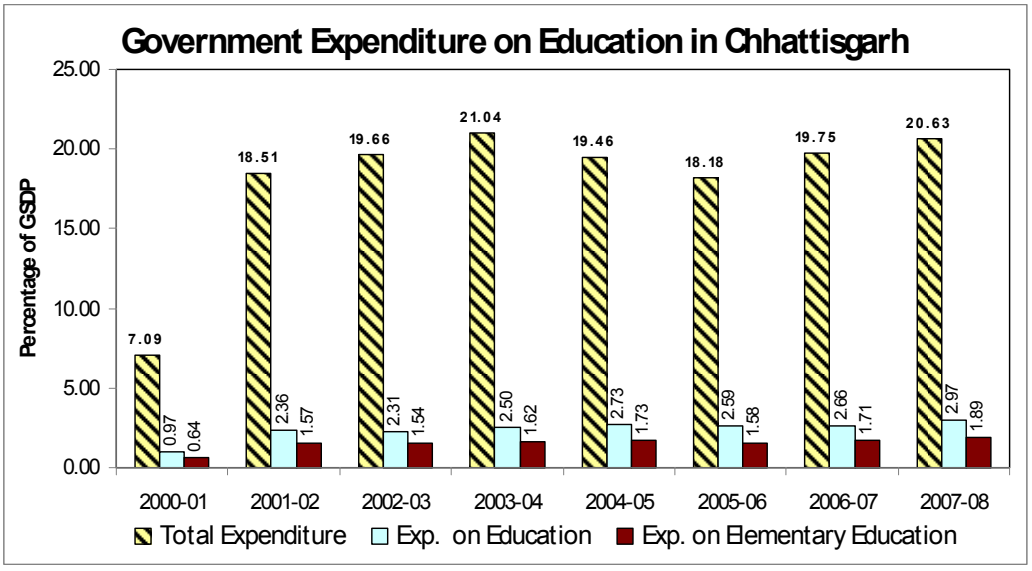
As per the table, the most important reason for not attending school is household work – but that is so only in Dantewada. This problem, along with the problem of compulsions of earning, does not admit of an easy solution since this is an outcome of poverty; short of compensating enrolled pupils financially, there is little that can be done to enrol out-of-school children of this type. But with respect to the other important reasons, matters are within the control of the government and can be attended to on the supply side, with some emphasis on habitation level persuasion of parents and children.

The special schools under Education Guarantee Scheme (EGS) and Alternative and Innovative Education (AIE) cater specifically to the out-of-school children. In Chhattisgarh, almost all EGS schools have been upgraded with very few remaining. However, AIE institutions are being relied upon to a substantial extent in the drive to enrol out-of-school children. Other strategies like bridge courses for older children would also play an important role. The large number of tribal students and the importance of migration as a reason for disruption of schooling point to the crucial role of residential schools for the tribal children. Such schools are currently being looked after by the Tribal Welfare department of the Government of Chhattisgarh. The disturbed conditions in Dantewada would have significantly contributed to the problems (directly or indirectly), but attempts should be made at least to minimise this impact to the extent it is within the control of the government.

6. Government expenditures on elementary education

Public expenditure on education (through the budget) in the state has generally been lower than in many other states, particularly the southern states. Figure 4.3 depicts the trends in such expenditures from the inception of the state to 2007-08. Ignoring the first year (actually a part-year), while total government expenditure has been within a band of 18-21 percent of the GSDP, that on general education (i.e., not including technical education) has been around 10 percent of the total (between 2.3 and 2.7 percent of GSDP), except in the last year (2007-08) when it shot up to almost 3 percent of GSDP. Expenditure on elementary education constituted the bulk of that on general education, ranging between 1.5 and 1.7 percent of GSDP, again shooting up in 2007-08 to 1.9 percent.

Figure 4.3



Per capita expenditure on elementary education (in constant 1999-2000 prices) has been rising fast, from Rs. 219 in 2001-02 to Rs. 362 in 2007-08. It may be pertinent to note that almost from the beginning of this period, *Sarva Shiksha Abhiyan* (SSA) was expected to incur substantial amounts of expenditure on elementary education. This could have acted as a dampener on government expenditure on elementary education through the budget, particularly when the state

had to provide for the matching amounts with respect to central transfers under SSA through the budget.

SSA is a Centrally Sponsored Scheme administered by the Ministry of Human Resource Development (MHRD), Government of India. Its main objective is to make 'education for all' a reality by ensuring coverage of every aspect of education, particularly those that are missed out in the traditional system of public provision of education. The GoI funds that are transferred to an autonomous apex society that is charged with the responsibility of implementing the scheme at the state level is required to be matched by state transfers to the society at a given (varying over time) ratio. The scheme also lays down an elaborate sub-state level structure, which are financed by the state level society.

The MHRD releases funds directly to the Rajiv Gandhi Shiksha Mission (State Project Office or SPO). The state Government has to transfer its share to the SPO within 30 days of the receipt of the central share (grant-in-aid). Funds are to be then transferred by SPO to District Project Offices (DPOs), DPOs to Block Resource Centres (BRCs) and BRCs to Village Education Committees/ Gram Nirman Samiti/ Janbhagidari Vikas Samiti within 15 days. All transfers are to be through telegraphic transfer/drafts and kept in bank accounts.

Although the scheme was formally initiated in 2001-02, many states including Chhattisgarh could not start implementing it in earnest until 2002-03. The planned and actual expenditures incurred under SSA and the sources of funds during the initial years are provided in Table 4.9. It shows that utilisation of funds was rather poor in the first two years of operation of the scheme in the state (2002-03 and 2003-04), after which it jumped to more than 100 percent in 2004-05. Since then, utilisation of funds has been consistently above 90 percent of the availability.

Table 4.9: Financing and Utilisation of SSA Funds 2002-03 to 2007-08

(In Rs. Crore)

Year	AWP & B	Actual Availability of Funds			Actual Exp	Utilization (%)
		GoI	State	Total		
2001-02	--	--	--	--	--	--
2002-03	75.44	30.22	9.01	39.23	24.14	61.53
2003-04	212.19	75.01	31.20	106.21	68.59	64.58
2004-05	359.17	195.97	65.00	260.97	273.91	104.96
2005-06	550.68	291.84	103.97	395.81	424.42	107.23
2006-07	821.32	511.18	160.57	689.32	643.42	93.34
2007-08	784.78	467.88	253.53	721.41	687.21	95.26

Source: Allocation, Releases and Expenditures, www.ssa.nic.in

Table 4.10 provides details of expenditure under SSA by activities. We have analysed the data for the year 2007-08 here. Oddly enough, the single largest component of SSA expenditures is the salary of teachers of primary and upper primary schools, which constitutes almost 39 percent of total expenditure through SSA, even though the main burden of salaries of teachers is supposed to be borne by the state government.[9] On civil work including maintenance, the spending is more than 32 percent of the total SSA spending. Among other significant expenditures, the

[9] In most states, salaries do not constitute such a large part of SSA expenditures; usually civil works gets top billing.

cost of free text book distribution (7.44 percent), EGS Centres & AIE (3.35 percent) teachers' training (2.43 percent), school and teachers' contingency (2.15 percent), and management costs (2 percent) are important.

Table 4.10: Spending Pattern of SSA Funds in 2007-08

(Rs. lakh)

S.No.	Component	Allocation	Expenditure	% of Total Expd.
1	**Teachers' salary**	30606.8	26634.03	38.76
2	**Textbook**	4883.56	5113.28	7.44
3	**TLE**	600.36	400.04	0.58
4	**BRC (other than civil works)**	532.91	379.65	0.55
5	**CRC (other than civil works)**	127.98	130.53	0.19
6	**Maintenance**	1993	1920.42	2.79
7	**IED**	192.6	180.09	0.26
8	**School grant**	891.9	914.5	1.33
9	**Teacher grant**	568.19	564.66	0.82
10	**Civil works**	24846.91	22334.12	32.5
11	**EGS/AIE**	2495.35	2302.98	3.35
12	**Teacher's training**	1825.09	1667.58	2.43
13	**Innovative activities**	946.3	775.74	1.13
14	**Community training**	102.56	96.94	0.14
15	**Research and evaluation**	624.33	298.96	0.44
16	**Management cost (District)**	2885.82	1346.84	1.96
17	**Management cost (State)**	1006.52	381.16	0.55
18	**Total**	**75130.18**	**65441.52**	95.23
19	**NPEGEL**	1313.36	1244.38	1.81
20	**KGBV**	2034.78	2034.91	2.96
	Grand Total	**78478.32**	**68720.81**	100

***Source*:** State-wise and component-wise allocation & expenditure, http: www.ssa.nic.in

Since SSA expenditures constitute a substantial part of the public expenditure on elementary education in the state although the larger part of it does not go through the state budget, it is important to consider these two expenditures together to get an idea of the extent and pattern of the entire public expenditures on elementary education. We once again consider the year 2007-08; the combined data are presented in Table 4.11. During 2007-08, total SSA expenditure (without KGBV & NGEPEL) was Rs. 654.4 crore. The spending pattern reveals that about a third of the total expenditures are being incurred through SSA; although the states' share in this does flow through the budget, the relative extent of SSA expenditures is such that conclusions drawn on the basis of budgetary expenditures alone can be misleading. The data in Table 4.11 have been grouped under six types of expenditures to help analyze the pattern.

Table 4.11: Budget + SSA Expenditures on Elementary Education, 2007-08

Category	SSA+ Budget expenditure (Rs. Lakh)	SSA Expd		Budget Expenditure	
		SSA expenditure (Rs. Lakh)	SSA as % of total category expenditure	Budget expenditure (Rs. Lakh)	Budget as % of total category expenditure
1.Administration, monitoring and evaluation	9180.63	1728.00	18.82	7452.63	81.18
2.Teacher salaries	112763.95	27198.69	24.12	85565.26	75.88
3.Teaching quality and incentives	3911.26	2366.58	60.51	1544.68	39.49
4. Direct expenditure on students	20328.40	6069.11	29.86	14259.29	70.14
5.Infrastructure	27800.41	25169.04	90.53	2631.37	9.48
6.Decentralisation	3784.15	2910.10	76.90	874.05	23.10
Total	**177768.80**	**65441.52**	36.81	**112327.28**	63.19

Source: Our calculations based on budgetary data and those from MIS, SSA Chhattisgarh

First of all, as one would expect, teacher salaries constitute the bulk of the total expenditures at more than 63 percent; of this the budgetary expenditures account for 76 percent. The second largest category of expenditures is on infrastructure (about 16 percent), largely incurred through SSA (91 percent). Direct expenditures on students like free textbooks and scholarships (shared between SSA and the budget in the ratio of 30:70) constitute the other significant category of expenditure at more than 11 percent of the combined total. The latter category is an important one in a state like Chhattisgarh with substantial poverty, because poverty is often a constraint with respect to demand for education (as revealed in the reasons for children staying out of school). By reducing private costs of education, direct expenditures on students can boost demand for education.

7. Mid-day Meals[10]

The utility of mid-day meals in improving enrolment and attendance in schools are now beyond dispute; so are the other advantages of societal integration, contribution to poverty alleviation and reduction of hunger among children. The scheme has as its strong advocate several persons of eminence like Amartya Sen and Jean Dreze. The state has decided to cover all non-private primary/elementary schools under the scheme, but in practice a substantial percentage of schools are yet to be covered.

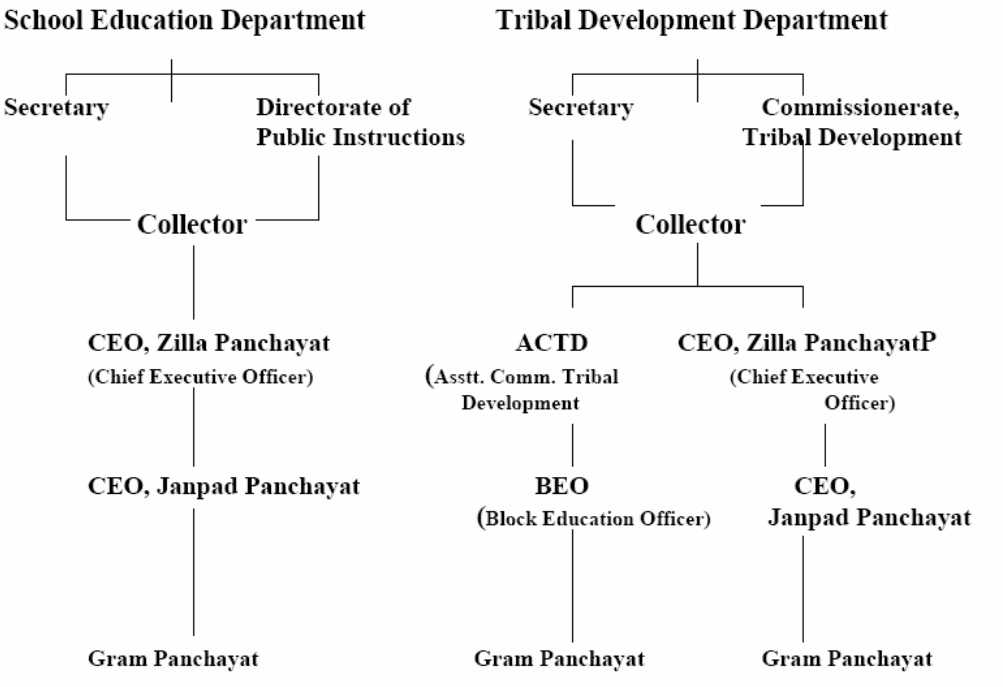
The Rural Development Department was responsible for implementation of the scheme in the state till 31 March 2006. Beginning April 1 2006, the state government entrusted the administration of the scheme to the School Education Department and Chhattisgarh *Nagrik Apurti Nigam* (CNAN) as the nodal transport agency' from the year 2005 for transportation of foodgrains for the scheme. As in the case of school infrastructure and administration, the Tribal Development Department manages the implementation of the programme in the tribal blocks. The organisational structure for implementation of the programme in School Education

[10] A large part of this section is based on the performance audit of the mid-day meal scheme contained in the state's Audit Report (civil and commercial) for the year 2006-07, published by the Comptroller and Auditor General of India.

and Tribal Development Department is shown in Figure 4.4. At the grassroot (school) level, *Gram Panchayat*s and municipal bodies are the implementers of the scheme, with help from self-help groups in some of the districts (e.g. Bastar).

Figure 4.4

Organisational Structure of Mid-day Meals Programme



Source: Audit Report (civil and commercial), Chhattisgarh, 2006-07

The meals are in principle provided to pupils in 34220 schools as of early 2008, and these school lunches are to be provided on 220 days in a year. The government has increased the per pupil expenditure on mid-day meals to Rs. 2.50. The expenditure incurred on MDM scheme in the state was about Rs. 121 crore in 2006-07, with the School Education and the Tribal Development departments accounting for Rs. 67 and 54 crore respectively.

From all accounts (and from what the study team observed in its visits to a few schools in Bastar district), the scheme is doing all that it is expected to do. That does not of course imply that there is no scope for improvement. First, the quality of food varies considerably from one school to another (we observed only rice and *dal* being served in one school); obviously, there is a need for monitoring, and the best monitoring can be done by the parents of the children, particularly mothers. This brings us to the second point: the involvement of parents, parent-teacher committees or village education committees seems to be minimal. One is not certain whether they exist only on paper in many places. Third, many schools lack kitchen sheds for cooking, adequate cooking utensils, LPG cylinder and stove, adequate water supply and even a helper. While it is understandable that there will be teething troubles in implementing a major scheme like this, in the several years since the implementation

of the scheme was begun; much of the gaps should have been filled up by now. Also, the management of the scheme including aspects of accounting and record-keeping needs to be more systematic; continued slack in these areas is certain to give rise to opportunities for corruption that will unnecessarily smear the programme itself. Further specific aspects of improved management would be (a) the tracking of the foodgrains received by the state government to the last point to prevent pilferage and diversion and (b) getting a fairly accurate picture of enrolment and attendance (given that these figures are often overestimated for various reasons).

Projecting the expected cost of covering all the primary and upper primary school children (class I-VIII) under MDM scheme during the eleventh plan period by taking the conversion cost incurred by the state to be Rs 0.50 per student and overall conversion cost to be Rs. 2/ 2.50 (primary/ upper primary) per student per day, we get a rough estimate of cost of around Rs. 216 to 235 crore per year, which adds up to Rs. 1113 crore in the four years. The state cost, however, is between Rs 50 crore and 55 crore for successive years, the rest being central contribution. The fact that actual expenditure in 2006-07 was only about Rs 121 crore implies that (i) our estimates are more like ceilings and (ii) there is probably a substantial number of students not covered yet. As the state gets a major benefit at relatively small cost under the scheme, it would be advisable to aim for maximum coverage immediately. If achieved, the additional resource requirements from the state's own sources would be around Rs. 30 crore per annum.

Table 4.12: Projection for Mid-Day Meal Scheme, Chhattisgarh

	2008-09	2009-10	2010-11	2011-12	Total
Primary enrolment (I - V) (no. in lakh)	37.30	38.13	38.96	39.79	190.65
Average 90% attendance (no. in lakh)	33.57	34.32	35.06	35.81	171.59
State cost @ 0.50 per child (Rs. crore)	16.79	17.16	17.53	17.91	85.79
State's cost per year @220 school days (Rs crore)	36.93	37.75	38.57	39.39	188.75
Total amount to be budgeted (Centre + state share) (iRs. crore)	147.71	151.00	154.28	157.57	754.98
Upper primary enrolment (VI - VIII) (no. in lakh)	13.90	14.48	15.05	15.63	72.38
Average 90% attendance (lakh)	12.51	13.03	13.55	14.07	65.14
State cost @ 0.50 per child (Rs. crore)	6.25	6.51	6.77	7.03	32.57
State cost per year @220 school days (Rs crore)	13.76	14.33	14.90	15.48	71.66
Total amount to be budgeted (Centre + state share) (Rs crore)	68.80	71.66	74.52	77.38	358.28
Total Cost (Rs. Crore)	216.50	222.65	228.80	234.95	1113.26

***Source*:** Computed on the basis of enrolment data

8. Estimation of resource requirements to fill the gaps

To make a rough financial estimate of requirement of financial resources for elementary education, it is necessary to identify the gaps that exist in the provision of the service, get an idea of the size of the gaps and estimate the cost of covering those gaps. Following our preceding discussion, these gaps can be classified into four categories: infrastructure, teachers, facilities for out-of-school children, and mid-day meals. After identifying the gaps in physical terms, their costing is done on the basis of unit costs adopted by the state. Both refer to the year 2006-07.

For building new schools, the estimated unit cost has been assumed to be Rs. 4 lakh (including 2 classrooms, toilet, drinking water and electricity facilities and the boundary wall). For constructing one additional classroom in single class-room schools, the unit cost is assumed to be Rs. 1 lakh. For building toilets, particularly for girl students, the cost assumed to be Rs. 20,000 and for providing drinking water facility in the schools, the assumed cost is Rs. 15,000 per unit as per the SSA norms. Average cost of providing electricity facility to the schools has been assumed to be Rs. 15,000 per school for our calculations, given in detail in the table below.

Table 4.13: Infrastructure Gap, 2006-07

(Rs. lakh)

Category	Unit Cost	Number	Total Cost
Requirement of new PS	400000	1732	6928
Requirement of new UPS	400000	1128	4512
Pucca building of existing schools	400000	12982	51928
Additional classrooms	100000	2557	2557
Drinking water facility	15000	8973	1346
Electricity connection	15000	38134	5720
Toilet facility for girls	20000	40378	8076
Total			**81067**

***Source*:** Computed on the basis of data from DISE and MIS, SSA Chhattisgarh

According to data provided by the SSA State Project Office of Chhattisgarh, as of 2006-07, there was a need to start 1732 new primary and 1128 new upper primary schools in the state to fulfil 1km and 3km norms respectively. For this purpose, additional resource requirement would be Rs. 69.28 crore and Rs. 45.12 crore respectively, which adds up to Rs. 114.4 crore. Constructing *pucca* buildings for 12982 existing schools in Chhattisgarh that did not have either *pucca* or semi-*pucca* buildings till 2005-06 would approximately cost around Rs. 519 crore. To provide all the single class room schools (2557) with one more class room, the cost would be around Rs. 25.57 crore. There are around 8973 schools (20 percent of total) without any facility for drinking water. If they were to be provided with minimum drinking water facility as per SSA norm (Rs 15,000 each), then the total estimated additional resource requirement would be around Rs 13.5 crore for this particular purpose. Only 15 percent of the schools had electricity connection in Chhattisgarh. If the village (where the school is located) itself is not electrified yet then it would not be possible to provide electricity to the school alone. Assuming that is not the case, the estimated cost of providing minimum electricity facilities to all schools without power would be around Rs. 57.2 crore. Only 10 percent schools in Chhattisgarh had separate toilet facilities for girl students. This is a very serious issue given the backdrop of lower enrolment and high drop-out of girl students in the state. The approximate cost has been calculated to be around Rs. 80.8 crore to provide toilet facilities for the girl students in all schools as per SSA norm of Rs. 20,000 per school.[11] The total estimated cost to fulfil these basic infrastructural gaps, excepting the salary gap for the newly required teachers for the new schools, is estimated to be Rs 810.67 crore.

[11] The numbers of schools with various types of buildings (including none) were estimated by applying ratios from DISE data to more recent data on number of schools in the public sector. The numbers of single classroom schools, schools without separate toilet for girls, those without electricity and those without drinking water were estimated in the same manner.

One of the most significant gaps in elementary education sector in Chhattisgarh was that of teachers in Chhattisgarh. We estimate a gap of 13130 school teachers in primary and upper primary schools to be recruited as per the norm of 40:1 pupil-teacher ratio in the base year.[12] If we assume that the new primary and upper primary school teachers would be getting on an average Rs. 3000 per month, then the estimated additional annual cost on this count would be Rs. 47.27 crore. If we assume that every new school would get two teachers on an average and each of them would be getting Rs. 3000/= per month then the total additional expenditure requirement per annum would be around Rs. 20.6 crore. Teachers' training and teacher grants would also cost Rs. 5.66 and Rs. 0.94 crore respectively per annum.

To bring the out-of-school children into different types of educational institutions as per their special needs, the government has a programme covering various aspects like strengthening of unrecognised Maktab Madarsas, bridge courses and residential camps. While each of these methods has a specific per student cost attached to it, our estimate of the additional costs on this count are based on two simplifying assumptions: (i) a progressively declining number of out-of-school children, starting with 50,000 in 2007-08 and dropping to 10,000 by 2011-12, are brought into schools and (ii) the average cost per out-of-school child brought in is Rs 1000. These assumptions result in additional cost estimates varying from Rs 5 crore in 2007-08 to Rs 1 crore in 2011-12.

Table 4.14: Additional Resource Requirement for Elementary Education 2007-12*

(Rs. lakh)

Category	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Infrastructure gap	16213	17024	17875	18769	19707	**89589**
Teacher gap - existing schools	4727	4727	4727	4727	4727	**23635**
Teacher gap – new schools	0	2059	2059	2059	2059	**8237**
Teacher training	394	566	566	566	566	**2656**
Teacher grants	66	94	94	94	94	**443**
Out-of-school children	500	400	300	100	100	**1400**
Total	**21900**	**24870**	**25621**	**26315**	**27253**	**125959**

***Source*:** Our computations * Excluding requirements for MDM

Table 4.14 puts the estimates of additional resource requirements for elementary education together. The total additional resource requirement for infrastructure has been spread across five years (including the period 2007-10 which is already over), with 5 percent non-inflation cost escalation built in. All the figures in the table can thus be taken to be in 2006-07 prices. The total annual requirements for elementary education can be seen to range from Rs 219 crore to Rs 273 crore, totalling about Rs 1260 crore over the five-year period in 2006-07 prices.

[12] We actually allow for one extra teacher for schools with PTR between 50-80 and two additional teachers for schools with PTR>80.

V. FINANCING ADDITIONAL REQUIREMENTS

Bringing the estimates of resource requirements identified in the preceding three chapters together, we have the following annual additional resource requirements in the selected areas of human development.

Table 5.1: Estimated Additional Resource Requirement

(Rs. Crore)

Requirement in	2009-10	2010-11	2011-12
NREGA	0.00	0.00	0.00
Housing (IAY)	0.00	0.00	0.00
Pensions	0.00	0.00	0.00
Health	1168.04	1226.45	1287.77
Education	296.35	319.68	348.42
MDM	34.73	36.47	38.29
Total	**1499.12**	**1582.60**	**1674.48**
Pensions*	2.75	2.88	3.03
Total*	**1501.87**	**1585.48**	**1677.51**

* With pensions raised to Rs 400 p.m.

The above amounts build in 5 percent inflation on the values estimated in the previous chapters, taking care to vary the inflation adjustment according to the year in the prices of which the original estimates are computed. Since the base year for the estimates vary, the earliest being 2006-07, actually the estimates were made for each of the years following the base year till 2011-12. The annual estimates so computed were based on some assumptions (spelt out in the previous chapters) regarding the spacing of the expenditures over the projection period. As such, even though the above requirements relate to last three years of the Eleventh Plan, they are methodologically predicated upon the expenditures estimated for the years already past (and hence excluded in the above table) within the projection period having been actually realised. For example, for both education and health, certain amounts were projected as required for the years 2007-08 and 2008-09, apart from those reported above for the following three years. The figures above thus implicitly assume that the additional expenditures required as estimated for the years 2007-08 and 2008-09 were actually spent; it is easy to see that if that assumption did not hold and actual expenditures were less (more) than required in these two years, the requirements would have to be adjusted upwards (downwards) for the following three years.

These are fairly large amounts for a state like Chhattisgarh; in terms of ratio to GSDP, these would probably be around 2 percent of GSDP. The difficulty of financing such large resource requirements can also be appreciated fully if we put it in another way – if this entire amount were to be financed from state's own taxation, the tax-GSDP ratio would have to rise by about 2 percentage points or by about 25 percent from the present level *and* the entire increase would have to be allocated for this purpose every year. Clearly, this is a tall order.

We have estimated what can be called a tax revenue envelope on the basis of projected GSDP and the highest tax-GSDP ratio that the state has achieved so far with respect to four main (groups of) taxes: stamp duty and

registration fees, sales tax/VAT, state excise and taxes on road transport.[13] These estimated tax revenues indicate that the maximum additional tax revenues (defined as tax revenue of year t minus tax revenue of year t-1) that can be raised during the period 2009-12 are Rs. 300, 317 and 335 crore, unless a sudden spurt in the efficiency of the tax administration, or a drastic rise in tax rates or both take place. Also, a substantial rise in the trend growth rate of the economy could achieve a much higher increase in tax collection. If we compare these numbers with the amount of additional resources required, we see that the additional tax revenues cover only about 20 percent of the requirements.

What other sources of funds can one think of? There are five other possible avenues of getting funds: user charges, central transfers, expenditure reallocation, private participation and external assistance. While it is not possible for us here to go into a detailed discussion of each of these possibilities with any assurance, some comments on each of these may be offered.

With respect to user charges, while it may be a good idea to levy small user charges for many of the services offered free as a matter of improving efficiency, encouraging greater vigilance and fostering participation, in a state like Chhattisgarh with its high level of poverty, the potential for raising substantial resources through user charges may be rather limited, particularly in the human development areas. One might think of more substantial user charges for various economic services, and use the resources thus raised to cross-subsidise human development areas. Again, this is feasible to some extent, but would probably fall far short of the requirements.

Higher central transfers offer an easy way out, and could actually be more substantial. However, by assumption and by the way many of the schemes of matching grant are set up, we have already built in a substantial increase in specific purpose central transfers. However, there are two possible ways – one more certain than the other – that part of the additional requirements would be covered through additional transfers. First, bulk of the additional expenditure on elementary education can be made a part of the SSA work plan, qualifying for central matching grant. Second, a substantial part of the additional expenditure on health could similarly be built into NRHM and other programs like Total Sanitation Programme and Swajaldhara. A part of the expenditure would then get underwritten by central transfers. Essentially, it is a question of leveraging the limited resources available with the state government to get the maximum amount of transfers in preferred areas. Other transfers mainly consist of general purpose Gadgil formula transfers through the Planning Commission and Finance Commission transfers. Bulk of the transfers from the Planning Commission being formula-based, there is little likelihood of a sudden jump in these. And the 13th Finance Commission's awards cannot be predicted at this point of time; the best bet for an increase in general purpose transfers would be a continuation of the spurt in central tax revenues that has been observed in recent years.

On expenditure reallocation, again it would be unwise to pin much hope. This is because of several reasons:

- Any young state necessarily has to spend a relatively higher amount on infrastructure; this is more so in Chhattisgarh because of the relatively low level of infrastructure development which, indeed, was one of the main reasons for its statehood.

[13] Motor vehicle taxes and taxes on passenger and goods together constitute taxes on road transport.

- The current expenditure patterns confirm an existing tilt towards physical infrastructure that would be difficult to change at the policymakers' level.
- It is easier to finance (even with loans) physical infrastructure because the financial returns from such investment are more probable, definite, immediate and non-dispersed; investments in human development are not so, and hence more difficult to finance. Financing such expenditures with loans would generally be unwise.
- The political economy factors favour larger expenditures on physical infrastructure and tokenism in human development because of the higher visibility and smaller lags in political return from the former.

Private financing of human development expenditure needs could easily solve the problem, but apart from its availability and feasibility, there are other issues (like accommodating profit motive often attached to private investments within the human development concerns) that need to be sorted out. In this endeavour, the best bet would be to conceptually break down various services provided in the human development areas into specific tasks, consider each separately for feasibility with respect to private participation (with or without profit motive) and proceed accordingly. Care has to be exercised to ensure that when profit motive is present, it does not negate the basic objective of the intervention.

As for the last-mentioned source of external assistance, one cannot unilaterally make it happen. But it is important to make the most of any opportunity that presents itself (we believe some externally assisted programmes in human development areas are actually in operation in the state); at the same time, it would be advisable to avoid substantive loan-based assistance programs unless absolutely necessary. The latter caution, in fact, arises from the same concern that dictated our not even mentioning borrowing as a way of financing human development expenditures. The vicious cycle of expenditures financed by loans not yielding enough returns to service the loans resulting in higher deficits, and deficits resulting in more loans is too well-known in the context of state finances to require a justification for avoiding loan-financed interventions in the human development area, where there may not be any direct rate of return for the government and even if there is, it would have a long lag.

A final observation on financing is in order; there are numerous central or centrally sponsored schemes in operation in various areas that can be dovetailed to some extent with the human development requirements, reducing the resource requirements. Toilets in schools, for example, can be built under the total sanitation campaign, or NREGA funds can be utilised to build kitchen sheds in schools (rules permitting, of course). The possibilities are many, but it will require intimate knowledge of the various schemes as well as the requirements to work out the commonalities of object and make full use of them. This is particularly important for Chhattisgarh, given the obvious difficulties likely in the financing of the large (relative to available resources) projected requirements.

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